MEASURING CURRICULUM INTEGRATION IN THE JUNIOR GRADES

-The Design of an Instrument-

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ABSTRACT

This study was initiated in response to the Junior Division Review (1985) published by the Ministry of Education for the Province of Ontario.

Curriculum integration is an element used within the educational paradigm designed by the Ontario Ministry of Education. It is a term frequently verbalized by educators in this province, but because of limited resource support regarding this methodology, it was open to broad interpretation resulting in an extreme variation in its implementation. Indeed, the Ministry intimated that it was not occurring to any significant degree across the province. The objective of this thesis was to define integration in the junior classroom and design a measurement instrument which would in turn highlight indicators of curriculum integration.

The study made a preliminary, field-based survey of educational professionals in order to generate a relevant description of integrated curriculum programming as defined in the junior classroom. The description was a compilation of views expressed by a

random selection of teachers, consultants, supervisory officers and principals.

The survey revealed a much more comprehensive view of the attributes of integrated programming than tradition would dictate and resulted in a functional definition that was broader than past practices. Based on the information generated by this survey, an instrument outlining criteria of an integrated junior classroom program was devised. This measurement instrument, designed for all levels of educators, was named "The Hansson Instrument for the Measurement of Program Integration in the Junior Classroom". It reflected five categories intrinsic to the methodology of integration: Teacher Behaviour, Student Behaviour, Classroom Layout, Classroom Environment and Programming. Each category and the items therein were successfully tested in validity and reliability checks. Interestingly, the individual class was found to be the major variable in the measurement of integrated programming in the junior division. The instrument demonstrated potential not only as an initial measure of the degree of integrated curriculum, but as a guide to strategies to implement such a methodology.

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CHAPTER ONE: AN INTRODUCTION

Intent of the Study

One methodological concept that the Ontario Ministry of Education supports and encourages is curriculum integration. (Curriculum integration is also known as interdisciplinary studies. However, because of the more accepted use of the former term in Canada and specifically Ontario, curriculum integration will be the term used for this study.) This study deals with the formerly undefined nature of this concept, defines it more specifically, and develops an instrument with which to measure the degree of success to which curriculum integration has been implemented into the program of the junior classroom.

A Rationale for the Study

In order for any one educational system to adopt a type of methodology and achieve a relatively uniform outcome, there must be very careful definition of terms and an equally clear vision of expectations.

In the mid-1980's, for example, there was a general thrust in Ontario for cooperative learning opportunities because of the apparent increased synergy and use of language when such a methodology was used. Documents and books such as Shared Discovery (1985) and The Jigsaw Strategy (1985) clearly set outlines of implementation strategies and short and long-term expectations. This allowed all levels of educators complete familiarity with this methodology. Another excellent example of clear guidelines was from the Ministry of Education for Ontario in its Education in the Primary and Junior Divisions (1975) and the support document, The Formative Years (1975). In both of these guidelines, content and general approaches for those elementary divisions were defined, enabling the educator to pursue much more effectively an area of growth which was an articulated objective of the Ministry.

Another issue, but much less clearly defined, was the continuing orientation of the Ministry of Education to the concept of integrated curriculum programming. This was a methodology that the Ministry of Education had supported and encouraged for a number of years. However, there was no such parallel document for curriculum integration which gave educators and the community guidance as to its characteristics and what form it might take.

This resulted in a lack of implementation throughout the province in the junior division classrooms and highlighted the very real need for the establishment of clear guidelines.

Background to the Study

Education, because of its nature, tends to be an emergent philosophy, continually altered by community needs, psychological trends, physiological discovery, and swings in societal structure. These agents notwithstanding, there is a fundamental structure to which the Ontario Ministry of Education holds true. The mandate of the educational paradigm designed by the Ministry is to ensure that each student in this province is guaranteed the opportunity to excel at his/her own interests, defined by his/her own capabilities. To this end, the two educational properties of curriculum and methodology are continuously supported and interpreted. When the educational paradigm is viewed in its totality, elements of these two properties overlap and complement each other and reinforce their interdependence. The former is what should be taught and the latter is how it should be taught.

Some of the curriculum elements include the creative and extensive use of expressive and receptive language in all academic disciplines; the use of developmental and sequential learning opportunities in all grades which encourages the natural transition between concrete, representational and abstract learning stages; the active use of the arts to facilitate the individual's expressive abilities. Methodologies used to implement these curriculum areas include cooperative learning, activity-centred classrooms, process writing, and integrated curriculum programming. It is the latter that is the focus of this study.

Integrated curriculum programming is the backbone of the entire thrust of the Ministry of Education. It is evident in all recent Ministry guidelines including Education in The Primary and Junior Divisions (1975), Shared Discovery (1985) and Science In Primary and Junior Education: A Statement of Direction (1986). There is continuous reference made to the integeration of program. Integration is the glue that holds all of learning together. It is the cathartic agent that makes the applicability of education a logical outcome of rigid study of the disciplines. It is the living interaction that each discipline has with the entirety of learning. After all, no discipline can exist without the support of another.

Imagine Chemistry without Mathematics, or Natural Science without Language to describe its wonders, or Literature without anything from the environment from which to write.

If given but a moment of thought, curriculum integration would seem to be a most natural, unifying methodological element and something educators would use quite naturally because of its obvious reflection of the real world. Traditionally, however, the story is quite different. Formalized instruction has a long history of fragmenting the academic disciplines along narrow lines that belie their interdependence. The resulting impression is that each discipline stands on its own, seldom acknowledging the support of other areas. In the school system, the result has been a tendency to view learning opportunity time slots as a time for specializing in each area.

> Busy with completing their courses the teachers too often have failed to lead students to see that the present lesson has a definite connection with previous lessons, both from this teacher and others in different disciplines. 1

This, of course, brings to mind a traditional school experience, wherein every forty minutes was a new academic class, fragmented from the previous one. The relevancy and applicability of many of these classes were lost on the enquiring mind.

In Ontario, ever since the pivotal report, Living and Learning (1968) and the definitive Education in the Primary and Junior Divisions (1975), elementary schools, and particularly the primary divisions of those schools, have endeavoured to integrate their curriculum. There was a comparative ease in the primary division because of an intrinsic philosophy, supported by research, that young children learned through their play. Piaget's stages of cognitive development, and description of the capabilities of children at different ages had been well documented and strategies for effective teacher interaction had been outlined in studies such as Observing Children (a part of the Toronto Observation Project, 1980).

However, change in the junior division was slow. There was a view in this division that children learned through their work. Work was perceived as paper and pencil activities and divided along subject lines. Indeed, the Ministry of Education, in its Junior Division Review Report (1985), found that in less than 25% of the junior grade classes that it reviewed was currriculum consistently integrated. The Ministry continued to report that more than 75% of the schools reviewed treated subject areas as separate entities. "Planned integration and bridging of learning experiences across discipline lines were less frequently observed."2

In a final note, the Ministry observes that the teaching of subjects at particular times during the day was noted regularly in the junior division.

With biting wit, a superintendent in southern Ontario commented:

> Very early children learn that the dominant element in the control of their school lives is not their curiosity or their progress into the wonderful world of knowledge or being able to learn. Rather it is the clock for it has been ordained that at a certain time the class will stop 'doing art' and 'do creative writing'. This is excellent training for the day when this person will be told to stop producing bolts and turn out some nuts for awhile. 3

Statement of the Problem

In the Junior Division Review (1985), the Ministry of Education stated that there was a reluctance on the part of junior teachers to implement integrated programming in their classrooms. It is the position of this paper that this reluctance and its resulting deviance from the objectives of the Ontario Ministry of Education have stemmed from a lack of specific resource material. Indeed, the Ministry of Education itself, although it supports the concept of curriculum integration, has comparatively little resource information on what it is and what characteristics would effectively describe it. Without specific guidelines, there can only be confusion over the characteristics of curriculum integration.

The corollary to this is the apparent confusion over what to look for when trying to identify a classroom that uses curriculum integration.

The mandate set forth by this thesis is, therefore, to functionally define curriculum program integration as it relates to the junior classroom, and itemize specific criteria with which to identify such a program.

Assumptions and Limitations

It must be emphasized at the outset that this thesis is and can only be an initial, ground-breaking study. While being both realistic and pragmatic, the study must be exploratory in nature. The study will set guidelines and indicate direction in regards to curriculum integration in the junior grades. It will yield considerable assistance to the educator whether s/he is working as a classroom teacher or in a supervisory role. It will assume that the practising educator is one of the best sources of obtaining data regarding educational issues and characteristics. The study will use this significant resource as a foundation for its exploration. It will, because of its very character, be a source of ideas for further study.

References for Chapter One

1. John Flynn, "Learning", Ontario Teachers' Federation Committee on Integration of Total School Program. K-13: A Report, 1973, p. 11.

2. Ministry of Education for the Province of Ontario, "Education In The Junior Division: A Look At 42 Schools", Provincial Review Report No. 5, 1985, p. 6.

3. Flynn, Op. Cit., p. 11.

CHAPTER TWO: A LITERATURE REVIEW

It is not the purpose of this paper to extoll the virtues of integrated curriculum programming. That job has been well done by other authors. Nor is it possible to provide references to past assessment techniques in this area since no examples have been documented. Rather, this chapter provides a brief literary overview of curriculum integration as described by other educators. Such an overview reflecting the worth that others have put on integrated curriculum programming is helpful in establishing a framework from which to generate a functional definition of integration and to itemize criteria for the accurate identification of such a program.

As in many things philosophical, each person sees truth in a somewhat different manner. It has already been stated that descriptions of integrated programming in literature were varied. Descriptions have been subjective and articulated in language that was highly subject to interpretation.

Defining curriculum integration to the satisfaction of all was a herculean task especially when criteria had not been firmly established.

However, there were premises that were adhered to by some authors. Almost forty years ago, Ralph Tyler (1949) categorically stated that education was an accumulation of learning and in order to produce that cumulative effect, learning experiences must be organized in such a way as to reinforce each other. Such a horizontal organization of subjects would result in the learner attaining a perspective of greater unity. Narrow, compartmentalized learning was the result if no relationship between disciplines was made clear.

Tyler continued to articulate three criteria which described his organizing principle for effective learning. The criteria were continuity, sequence and subject integration. Continuity was the consistent reiteration between grades; sequence was the building up of experiences; subject integration was the horizontal interrelationship of curriculum which provided a unified view for the student.

This view that fragmented academic disciplines go against the dynamics of reality is present in the writings of most proponents of subject integration. Martin Levitt (1971) said that apart from a few

exceptions, most energies and events in the world are interdependent and continuous with each other from religion and sex to the sun and food technology. The very articulate Louise Berman (1968) restates the same concept somewhat more delicately:

> No man can live on this planet independent of his fellowmen. The complexity of modern life demands specialization and consequent interdependence such as we have never known before.
>
> This means two things: (1) Man must learn to respect the development of fields of knowledge which demand expertise that a single individual may not possess; and (2) man must work in interdisciplinary approaches on problems needing such an approach. 1

Berman, quite rightly, perceives a complicating factor in knowledge in that in the modern world it is increasingly fragmented. Formerly well established fields of study have been divided and subdivided making interrelationships unclear. This is problematic for children because so much of what children need to know is interdisciplinary in nature.

Thus, realizing that children's knowledge is naturally integrated, educators have attempted to define what integrated programming is. In a 1973 report, the Ontario Teachers' Federation stated that integrated curriculum was:

> characterized by learning which is synthesized across traditional subject lines and learning experiences which are arranged in order to be mutually reinforcing. 2

John Flynn (1973) extends that description by stating that in such an educational format:

> ...the aim is not mastery of skills in one area for the sake of producing another useful specialist. Rather the aim is to lead the learner to master skills so that he might better utilize all his other learnings, gain a greater appreciation of knowledge and man's particular mission to enlarge its compass, and leave him motivated to continue his endeavours hopefully beyond the points reached by the teacher. 3

Richard Pring (1973) reports that those who support curriculum integration believe that knowledge has a degree of overall unity. The result is that any one proposition or concept cannot be fully understood without a network of references to an entire system of concepts. Furthermore, different disciplines, although having clear and distinct boundaries, do interact and it is this interaction that needs to be made explicit in the curriculum as a whole.

In actuality, it is Pring's view which has the most acceptance in the Ontario educational system wherein the general integration of knowledge across the complete curriculum is the objective, at least for the elementary panel. In a like manner, educators like Mazurek (1980) and Berman (1977) continuously describe learning as a totality of knowledge. The totality is the sum of many parts and the parts are the sub-units of knowledge, or individual subject disciplines. While the sub-units each has an individual essence, there is

a continuous interrelationship with the totality of knowledge and, therefore, with all other sub-units. Mazurek even suggests that the totality of knowledge consists of the total of the individual disciplines plus the inter-relationships of these units. This, of course, would make the totality of knowledge more than just the sum of its parts.

Such an educational philosophy would make education a unit and not a series of lessons. Learning would become a continuous experience to which there would be no end and the development of the whole individual would be achieved by maximizing the employment of all available resources. 4

Psychologically, the concept of subject integration makes a good deal of sense. Both Piaget and Bruner have demonstrated that children learn from their experience. Piaget identified two learning concepts, assimilation and accommodation. In assimilation, a child incorporates a new stimulus into an already existing concept (schemata). In accommodation the child modifies the existing schemata in order to incorporate new data. In a like manner, Bruner stated that children base all new learning on former relevant experiences which then yield a modified but more complete concept. Moreover, the student uses his/her knowledge as the foundation for the acquisition of new

knowledge. In our Ontario school system we have accepted Bruner's view and identified the importance of experiences the student brings to the classroom from his/her unique background, and we have encouraged teachers to capitalize on those experiences. It is significant to bear in mind, then, that experiences are not limited to what occurs in the home or community environment, but also what occurs in other school experiences. Based on such accepted theory, it would prove worthwhile to the practise of education:

> to make provision in the curriculum for the inter-linking of the various disciplines...aimed at the acquisition of knowledge that has unity in its interconnected diversity. 5

Other authors are certainly aware that a full-scale implementation of an integrated curriculum would change the very structure of our educational system. The long term objectives of true horizontally integrated curriculum are such that they would stand contemporary education on its end. It would essentially revolutionize not only the process of education but make the end result much more sophisticated. Louise Berman (1977) suggests that there are two worlds in education, the inner world of the child and the outer world of reality. School programs should be formed to cater to both worlds. The interrelationships of the knowledges of the two worlds should be stressed in order that anyone dealing with knowledge perceives it

as an activity involving memory, creativity and involvement. In each school, teaching staff with various areas of expertise should be encouraged to work together.

In a similar vein, Pamela Perry writing in "Towards Integration" (1983), states that for the student, integrated curriculum would mean that barriers between subject areas would dissolve. Communication skills (language, mathematics, arts) the purpose of which is to interpret data from the environment, would not be confined to the narrow study of those three areas; rather, these skills would be applicable, and indeed, essential to the exploration of all other subject disciplines (known collectively as environmental studies). Hansson displays these relationships pictorially (see Fig. One: Hansson's View of Curriculum). Hansson is indirectly supported by Schmidt (1985) who states that in this way, newly acquired skills in communications may allow elementary teachers to allocate time to curricular areas without necessarily neglecting skill development.6 Pamela Perry also suggests that the student's school year might be composed of thematic units as opposed to more traditional course organization. This thematic approach is supported by Hedges and Martinello in the book Feeling, Valuing and the Art of Growing: Insights Into the Affective (1977). Like Perry, Hedges and

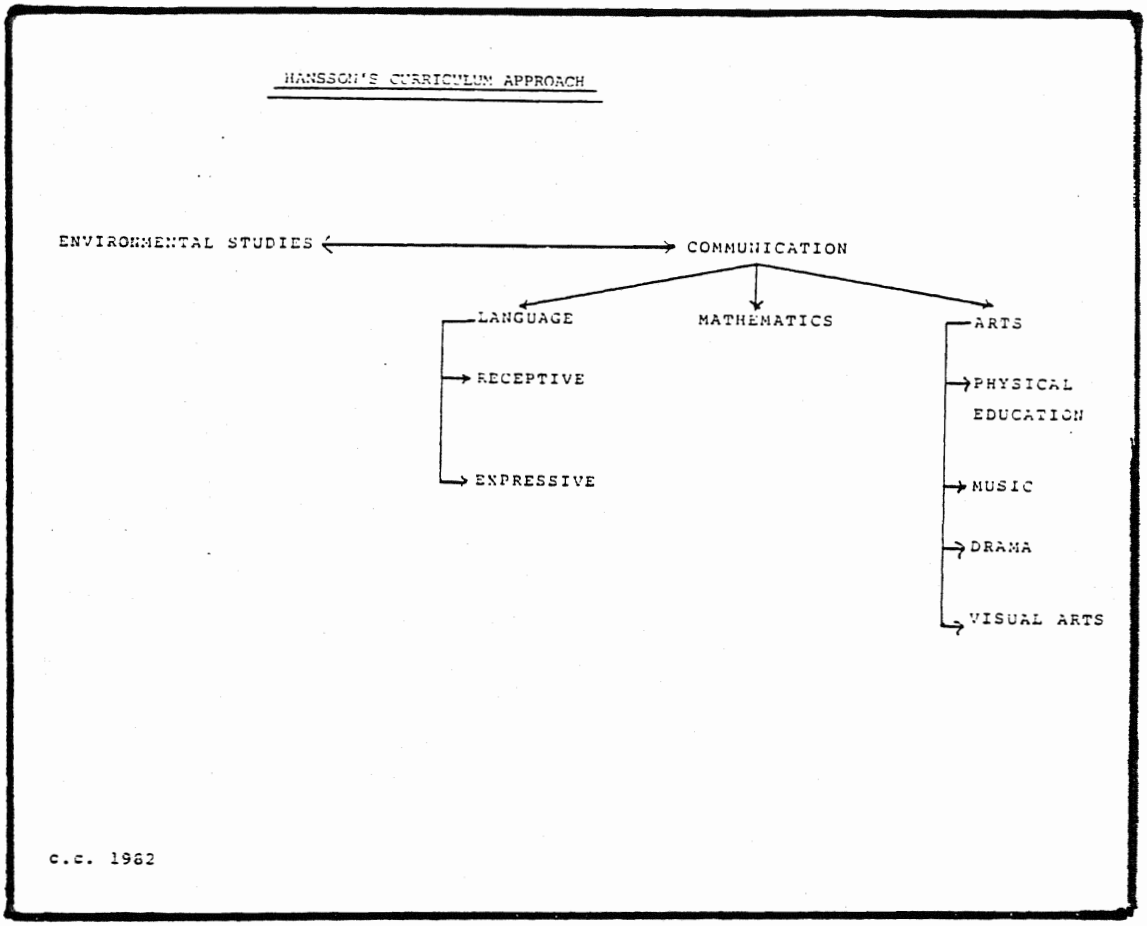

Fig. One: Hansson's View of Curriculum
- The Integrated Approach -

Martinello suggest that basic skills as well as the processing attributes of the student can be developed by teaching from themes. The authors believe that any topic can be selected and all learnings in each and all of the traditional curriculum areas can be found. Such programming provides in-school learning that more closely reflects the natural interrelationship of cognition and affect found in nonformal learning experiences.

While not dealing specifically with themes, J. A. Gibbons (1979) expands on the description of the concept of curriculum integration by presenting a picture of two clearly separate yet interactive domains (subject areas). Gibbons states that one domain must be the domain in which the enquiry or question is posed. The concepts of this one domain of enquiry are changed or modified in order that they be subject to a natural combination with the concepts of another domain, which he refers to as the instrumental domain. The combination of these two domains yields a forum for interactive problem-solving. An obvious example is physics and mathematics where the concepts of both domains are modified so that they readily work together.

In studies performed by Schmidt et al. (1985), the researchers maintained that it must be the teacher's

expressed intent to combine disciplines that defines curriculum integration. The mere presence of other disciplines does not define an integrated activity. They did not, however, even in their own study, describe in a complete sense what form that integration took.

For the teacher, s/he will present "a new curricular experience to the learner" and will guide "that learner into full appreciation of the relationship of that experience to the whole field of knowledge hitherto encountered".7 This will make the giver of knowledge an "educator" and not merely a "specialist". It will also add to the professional responsibility of the teacher to deliver the curriculum in a pragmatic, balanced manner. While actively seeking the overlapping of disciplines, the teacher must ensure the integrity of individual knowledges. Berman (1968), a strong proponent of integrated curriculum, warns that there are times when the areas of interrelationship are so insignificant that the common dimensions of knowledge are not clearly seen. At other times knowledge is so broad that to see the individuality of its sub-units is difficult. Strategies must be developed in education which enable the perception of knowledge both in its separateness and its interrelatedness.

Before one can act one must have a clear vision or objective. Only then can one design strategies in order to transform an abstract concept into concrete reality. The preceding descriptions by educators were visions indeed. They articulated the general intent of how they saw curriculum integration as an educational methodology. In support of these efforts, this study will functionally define integrated curriculum and identify specific criteria in order to facilitate effective implementation of integrated program.

Chapter Two: References

1. Louise Berman, New Priorities in the Curriculum, 1968, p. 167.

2. Ontario Teachers" Federation, Committee on Integration of Total School Program. K-13; A Report, 1973, p. 5.

3. John Flynn, "Learning", Ibid., p. 10.

4. John Flynn, "Learning", Op. Cit., p. 10.

5. G. Gozzer, "Interdisciplinarity: A Concept Still Unclear", Prospects: Quarterly Review of Education, 12(3), 1982, p. 282

6. William Schmidt et al., The Uses of Intergration in Language Arts Instruction: a Study of Six Classrooms", Journal Of Curriculum Studies, 17(3), 1985, p. 306.

7. John Flynn, "Learning", Op. Cit., p. 10.

CHAPTER THREE: INSTRUMENTATION

Defining Integrated Curriculum Programming

The mandate of this study was to design an instrument which measured the degree of implementation of integrated curriculum programming in a junior classroom in Ontario by assessing specific criteria regarding such a program. To accomplish this task, generally accepted criteria, which were manifestations of an integrated junior classroom, were required. In order to actualize such criteria, a preliminary yet comprehensive description of such a classroom would have to be generated in order to create a functional definition of what the instrument was analyzing. There were, therefore, two steps to the design of this instrument: the articulation of what curriculum integration is (functionally) and the itemization of specific criteria which characterize such a program. The study chose a field-based method in order to reach the first of these two objectives.

In the field-based study, four types of educators, working in school systems, were selected. They reflected the following areas: teachers, consultants, principals, and supervisory officers.

Three individuals from each category and from a variety of educational jurisdictions in south-central Ontario were contacted and asked to complete a questionnaire (see Appendix One). The questionnaire was straight forward and contained only two questions.

> 1)Please describe what an integrated programming approach in grade four(4) to grade six(6) means to you.
>
> 2)Please list the aspects of such an integrated program that you would look for in a classroom.

The questions were purposely direct in order to encourage the respondent to describe the issue as broadly or narrowly as they saw fit. It was thought that question one would serve primarily as a tool with which to generate a functional definition of integrated programming and question two would serve primarily as a tool with which to generate criteria for an instrument with which to measure integrated programming. The questions were, of course, interdependent and information obtained from one question could be used in the other category.

Results of Question One

The respondents were very articulate and comprehensive in their replies. They reflected a professional concern and expertise over both the philosophy of the integrated program and the identifiable attributes with which to define it. Surprisingly, however, each

educator consistently described a concept that enveloped a number of methodologies whose sum was what they perceived as integrated curriculum programming. It is the compilation and synthesis of their responses that make up the working definition that this study uses.

According to the respondents, integrated curriculum programming in the junior class is the interplay of child-centred programming, curriculum content, and teacher behaviour. Each one of these three components consists of several subsets whose sum serves to describe that category (see Figure Two: Components of Integrated Curriculum in the Junior Class).

a)The child-centred component: The respondents identified active learning as essential. Because of the great deal of student mobility, classroom layout must be flexible as students will be seen to move frequently and continuously as they travel between first one activity centre and another, or the Library, or a variety of work areas i.e., the hall, an empty classroom, the office, different work areas within the classroom). This mobility will, of course, promote a good deal of student interaction through activities that require cooperative learning and sharing of data.

Program ownership is manifested in the role the students have in planning activities, peer and

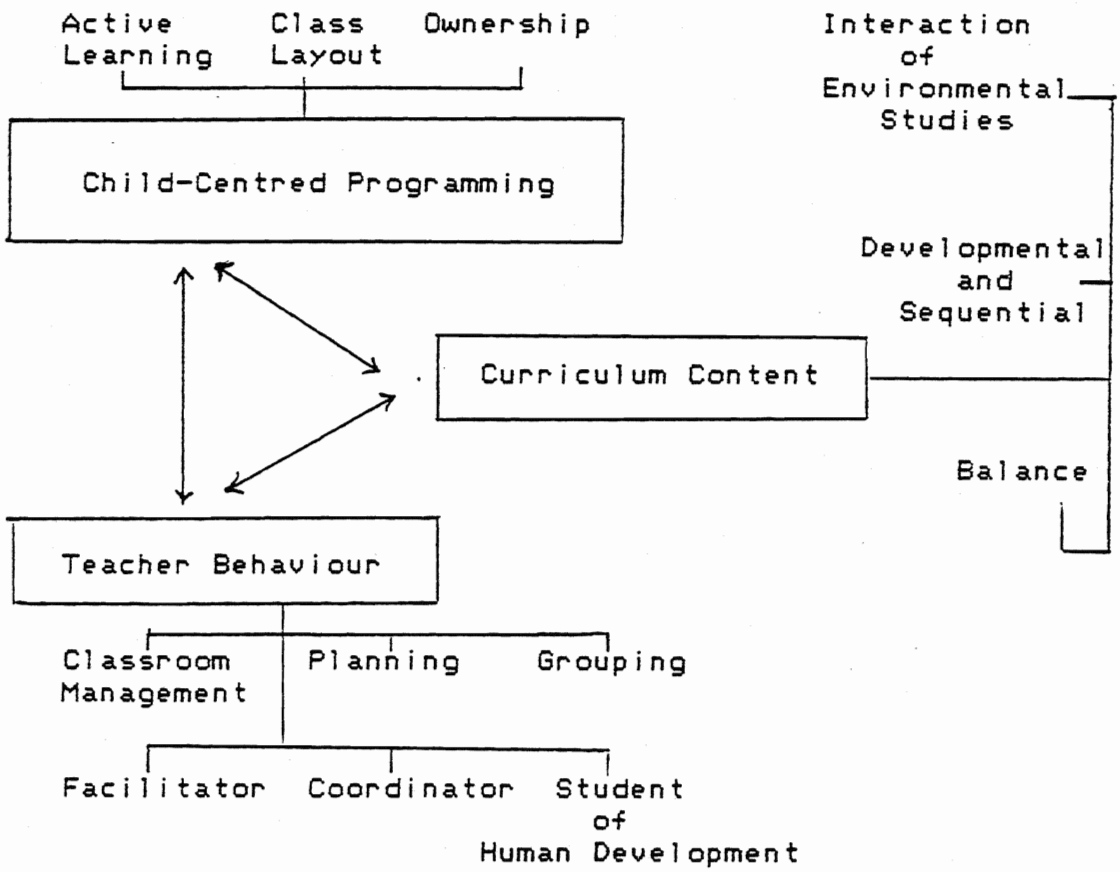

Fig. Two: Components of Integrated Curriculum in the Junior Class.

self-evaluation, and the responsibility they assume in self-discipline, record-keeping, and time-management. Such a program also places increasing responsibility on the students for their own learning, as well as that of their peers (because of the high degree of interaction and interdependence).

b)The curriculum content component: The respondents clearly stated that there must be a balance between all curriculum disciplines. They also affirmed that the process of learning is emphasized in the integrated classroom. There is extensive development of skills in problem-solving, researching, organizing and presenting (reporting) of ideas to peers, as well as the development of life skills which support the individual and the group.

Environmental subject areas are actualized through the communication skills which consist of Language, Mathematics and the Arts. As described in Chapter Two, the Hansson's View to Curriculum (see Figure One), developed in 1982, graphically reflects this concept wherein Environmental Studies is the sum of all data and Communication is the sum of all methods of communicating that data.

Curriculum content is taught developmentally, from the concrete to the abstract experience in the resource-based learning environment which provides a

wide variety of primary and secondary learning materials. These materials are relevant, and sufficiently varied as to challenge the learner in several different ways and at several different levels. The materials promote manipulation, reflection and experimentation. Moreover, integrated activities encourage the different materials to serve more than one purpose. This in turn reinforces one aspect of learning through another. Resources such as new but existing technologies like data bases and computer networking via modems are used in increasing frequency.

c)The teacher behaviour component: The respondents state that a teacher uses long-term planning in the integrated curriculum in order that themes build upon each other in a meaningful way. The divergence of curriculum disciplines is evidenced by activity centres and displays which reflect more than one subject area. The teacher ensures small and large group learning activities, accommodating the various learning styles of the students. In this continuing effort to individualize a program as much as is feasible, the teacher uses observation as part of the standard evaluation techniques as well as other formative and summative procedures. Such a teacher becomes essentially a facilitator, a coordinator and a student of human development.

The functional definition developed by this study is the following: Integrated curriculum programming in the junior class is the result of the interdependent interaction of content, child-centred dynamics and teacher behaviour in a curriculum where all communication skills are interpreters of all data (see Fig. Two: Components of Integrated Curriculum).

The Hansson Instrument for the Measurement of Integrated Curriculum for the Junior Grades

Now that a functional definition had developed, characteristics of that definition as identified in question two of the survey could be synthesized to form an instrument.

The responses from question two of the survey compared to question one were paradoxically diverse yet very similar. They were diverse in that the responses tended to reflect the priorities of the individual respondent as to what they would expect to observe in a junior classroom with an integrated curriculum. The responses were similar in that there was a recurring theme that integrated curriculum was more than the strict interrelationship of content. It was the interaction of the three component areas already identified. The respondents described in detail classroom manifestations which these three component parts generated. These manifestations or items were classified into five general categories:

Teacher Behaviour
Student Behaviour
Classroom Layout
Classroom Environment
Programming.

a) Teacher Behaviour: Respondents felt that teacher behaviour was an observable element in identifying an integrated curriculum. Items such as planning, evaluation, and personal style were cited.

b) Student Behaviour: The manner in which students behaved in the classroom was an observable element which would lead, in part, to a comprehensive picture of a classroom with integrated curriculum. Items such as independence, child-centredness, interaction, planning and evaluation were cited. Respondents were aware that student behaviour was the outcome of many elements but were unanimously adamant that this was the true test of an integrated curriculum approach.

c) Classroom Layout: While this may at first seem unrelated to the topic at hand, the respondents felt that a certain kind of ergonomic organization was necessary to accommodate an integrated approach as defined by categories a, b, d, and e.

d) Classroom environment: Displays of student work, student records, learning centres, and community input into the programme were cited as indicators of integrated curriculum in this area.

e) Programming: This category stressed the interaction of content and methodology such as student groupings, language across the curriculum, and types of evaluation as items to be measured in curriculum integration..

All the questionnaires from the field-based study were received and reviewed before any pre-conception as to what form the analysis was to take was established. This was done to ensure the most complete input from the respondents as opposed to the subjective perceptions of one writer. It was also necessary to review all questionnaires before a functional definition of integrated curriculum programming in the junior classroom could be generated.

All comments from the respondents were initially accepted and recorded. This was again to ensure the fairness of the survey. As comments were repeated by succeeding respondents, those comments were given an additional weighting factor. It had been decided that elements that were cited by 70% of the respondents would be retained for the instrument. Other less frequently cited comments would be eliminated from the instrument as not being sufficiently global for the purposes at hand. In reality, comments that were discarded were isolated responses occurring only once or twice.

The accepted responses were restated in order to serve as items for the instrument and placed appropriately in the instrument.

To each instrument item was added a scale for the measurement of the presence of that item in the classroom. The scale had four points.

a) Not Observable (N/O): The selection of N/O on the instrument would indicate that the specific item was not observable because of some extraordinary factor which prevented the observation.

b) 1: The selection of the number 1 on the survey would indicate that there was little or no evidence of the item in the classroom.

c) 3: The selection of the number 3 on the survey would indicate that there was an average degree of evidence of the item in the classroom.

d) 5: The selection of the number 5 on the survey would indicate that there was a high degree of evidence of the item in the classroom.

It was decided that the scale have only three numeric points for a very pragmatic reason. The author wished to make this a usable survey wherein people in disparate parts of this province could employ it. It was an assumption by the author that with too many degrees on a scale, objective observations would tend to acquire a subjectivity which would inhibit the power

of comparisons between different observers. Therefore a scale with limited choices was identified as preferable. Numbers 1, 3 and 5 were selected in order to underscore to the marker the difference in quality between "little", "average" and "a great deal". It was felt, again by the author, that directly sequenced numbers (such as 1, 2, 3) would not emphasize this sufficiently.

Please see Appendix Two for the complete Hansson Survey of Curriculum Integration for the Junior Classroom.

CHAPTER FOUR: THE PROCEDURES

The survey was repeatedly piloted informally through reviews and actual classroom implementations by a group of four principals until a form which was acceptable to the author and the pilot group was achieved. This final form was the one which was submitted for validity and reliability checks.

Validation of the Survey

In order to test for validity, the instrument was distributed to forty-five educational professionals. These professionals were evenly representative of three groups (fifteen per group): teachers of junior grades, consultants and principals. Each person was asked to read the survey and comment on four general areas for each of the five categories. The four areas for comment were:

a) the clarity of each question as to its intent;

b) appropriateness of the category placement for the items;

c) duplication of items in the same category;

d) the effectiveness of the item in measuring curriculum integration as defined by the instrument.

There was also a place for the validators to comment on the procedural instructions of the instrument. The validators did not have to apply the instrument, merely critique it.

It was imperative that as part of the validation, the validator accept the definition of curriculum integration as defined by the thesis. The definition was, therefore, outlined at the beginning of each validation package. (Please refer to Appendix 3 for a complete view to the makeup of the validation package.)

Reliability of the Survey

Perhaps the most arduous, yet by far the most interesting, of all the phases of the development of the survey was the test for reliability. It was imperative that the test be used by any number of observers and that there be general agreement in their results when they observed the same events.

In order to implement a reliability test for the Hansson Instrument, a team of observers was formed. The team consisted of two junior teachers (one male and one female) currently working in the educational field and one retired junior teacher (female). No specific training period was provided in order to avoid a

prejudicing effect on potential results. There were, however, two trial observations carried out before the formal reliablity tests began. This provided clarification as to the manner in which the reliability test was to take place and to accustom the raters to working together.

Five of each of the three junior grades (grades four to six inclusive) for a total of fifteen junior classrooms were contacted as forums for the reliability tests. The classrooms were in five different-sized schools and the schools were in three different urban boards in the Metropolitan Toronto vicinity. It is important to note that the classrooms were randomly chosen and would, hopefully, reflect a cross-section of classrooms in the test area.

The format of the reliability observations was simple. The three observers or raters would observe the same instrument category in a classroom, at the same time for twenty minutes, rest for five minutes, and proceed with the next category for the same prescribed amount of time. This continued until all five instrument categories had been observed for that class. The raters recorded their measurements during the observation of the dynamics of the class, not after. There was no instruction outlined as to where they should sit, or whether they should move around the

classroom. At the termination of the observation, the observers thanked their host teacher and moved on to the next class.

CHAPTER FIVE: THE RESULTS

Validation Results

An analysis of variance examined the responses of the fifteen teachers, fifteen consultants and fifteen principals for a total of forty-five raters. The validation procedure had twenty-two items (four questions in each of five categories plus two questions in the instructions - see Appendix Three: Validation Package for the Hansson Instrument). There was a total of 990 items which the forty-five raters were asked to respond to by answering affirmatively or negatively. Affirmatively meant that the respondent agreed with the instrument item. There were 873 affirmative responses for a total of 88.2% agreement with the intent and the wording of the instrument. Negative responses were random, showing no consistency in any one area.

An analysis of variance examined the difference between the respective responses of the three types of raters (teachers, principals, consultants). There was found to be no variation among the three groups. Regardless of job description, all raters consistently agreed with each other on the validity of the

```
MTB > print c1-c3
 ROW    C1    C2    C3

   1    22    22    22
   2    22    22    12
   3    14    22    22
   4    22    22    22
   5    19    22    22
   6    22    13    13
   7    18    12    16
   8    22    22    22
   9     8    22    22
  10    20    12    22
  11    15    21    20
  12    18    19    19
  13    22    10    22
  14    19    22    22
  15    22    22    22

MTB > aovoneway c1-c3

ANALYSIS OF VARIANCE
SOURCE      DF         SS         MS         F
FACTOR       2       10.0        5.0      0.30
ERROR       42      698.0       16.6
TOTAL       44      708.0

                                        INDIVIDUAL 95 PCT CI'S FOR MEAN
                                        BASED ON POOLED STDEV
LEVEL        N       MEAN      STDEV   ----+---------+---------+---------+-
C1          15     19.000      4.036   (-----------*-----------)
C2          15     19.000      4.629   (-----------*-----------)
C3          15     20.000      3.485         (-----------*-----------)
                                        ----+---------+---------+---------+-
POOLED STDEV =     4.077               17.6      19.2      20.8      22.4
MTB > stop
*** Minitab Release 5.1.3 *** Minitab, Inc. ***
Storage available 864046
```

TABLE ONE: Analysis of Variance Between Teachers, Principals and Consultants in Validating Hansson Instrument.

Instrument (see Table One: Analysis of Variance of Teachers, Principals, and Consultants).

In their comments, respondents found the survey thought-provoking and relevant. Interestingly, many of the respondents specifically noted that they welcomed the instrument as a statement on the criteria of curriculum integration in the junior classroom.

Reliability Results

There were several things the author wished to examine with the raw data that had been collected by the three raters and the fifteen observations:

a) the degree of agreement among the three raters which would indicate reliability of the instrument;

b) the effect that grade would have on the results;

c) the effect that individual question items had on the measure of curriculum integration;

d) the effect that individual categories had on the measure of integration;

e) the degree of cross-correlation of individual categories;

f) the potential reliability of the instrument with only one rater.

a) Rater Reliability: In order to analyze the data effectively an appropriate analysis package was necessary. An analysis instrument that was able to deal with multiple factors such as were present in the Hansson Instrument reliability check (classes, grades, items, raters) was imperative. The author narrowed the possilities to two packages: the Statistics Package for Social Science (SPSS) and the General Purpose Analysis Of Variance System (Genova). The Genova version was ultimately selected because of its sophisticated approach to multiple factor data as well as a strong recommendation for its use from the statisticians at the Ontario Institute for Studies in Education who were instrumental in the application of the analysis.

Using the Genova Version computer program, a design study analyzed the data in the five categories. The generalizability coefficient for each category was very high indicating very strong reliability. There was very little variance among the raters. Conversely there was an extremely high variance between classrooms which was anticipated because of the individuality of each class.

Teacher behaviour had an individual classroom variance component of .95305 and a rater variance component of .00182. The generalizability coefficient was .98966.

Student behaviour had an individual classroom variance component of 1.30077 and a rater variance component of .00007. The generalizability coefficient was .99329.

Classroom layout had an individual classroom variance component of 1.67994 and a rater variance component of .00026. The generalizability coefficient was .99681.

Classroom environment had an individual classroom variance component of 1.20528 and a rater variance component of .00072. The generalizability coefficient was .99481.

Programming had an individual classroom variance component of 1.38291 and a rater variance component of .00011. The generalizability coefficient was .99648.

See Table Two: Summary of Analysis for Individual Categories and Tables Three to Seven for detailed analysis of each of the five categories.

b) Grade Effect: The data were analyzed twice, once with the grade factors and once without. A "G study" including the grade factor found that grade level (four to six) was found to have no effect on the results of the measurement (see Appendix Four: Summary of Genova

	Class Variance	Rater Variance	Generalizability Coefficient
Teacher Behaviour	.95305	.00182	.98966
Student Behaviour	1.30077	.00007	.99329
Classroom Layout	1.67994	.00026	.99681
Classroom Environment	1.20528	.00072	.99481
Program	1.38291	.00011	.99648

TABLE TWO: Summary of Genova Analysis of Coefficients for Individual Categories.

GENOVA VERSION 2.1
D STUDY

DESIGN CXRXT

D STUDY DESIGN NUMBER 001-001

OBJECT OF MEASUREMENT :	C	FACETS :	R T
G STUDY POPULATION SIZE :	INFINITE	G STUDY UNIVERSE SIZES :	INFINITE INFINITE
D STUDY POPULATION SIZE :	INFINITE	D STUDY UNIVERSE SIZES :	INFINITE 12
D STUDY SAMPLE SIZE :	15	D STUDY SAMPLE SIZES :	3 12

	VARIANCE COMPONENTS IN TERMS OF G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES					VARIANCE COMPONENTS IN TERMS OF D STUDY UNIVERSE (OF GENERALIZATION) SIZES				
				VARIANCE COMPONENTS FOR MEAN SCORES					VARIANCE COMPONENTS FOR MEAN SCORES	
EFFECT	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS
C	0.82133	1.0000	1	0.82133	0.34086	0.95305	1.0000	1	0.95305	0.34049
R	0.00524	1.0000	3	0.00175	0.00177	0.00546	1.0000	3	0.00182	0.00176
T	0.42019	1.0000	12	0.03502	0.01746	0.42019QFM	0.0000	12	-------	-------
CR	0.00406	1.0000	3	0.00162	0.00266	0.02980	1.0000	3	0.00996	0.00257
CT	1.50065	1.0000	12	0.13172	0.01587	1.50065	0.0000	12	-------	-------
RT	0.00256	1.0000	36	0.00007	0.00019	0.00256	0.0000	36	-------	-------
CRT	0.30030	1.0000	36	0.00034	0.00067	0.30030	0.0000	36	-------	-------

QFM = QUADRATIC FORM

	VARIANCE	STANDARD DEVIATION	STANDARD ERROR OF VARIANCE
UNIVERSE SCORE	0.95305	0.97624	0.34049
EXPECTED OBSERVED SCORE	0.96301	0.98133	0.34040
LOWER CASE DELTA	0.00996	0.09981	0.00257
UPPER CASE DELTA	0.01178	0.10853	0.00297
MEAN	0.06602	0.25694	

GENERALIZABILITY COEFFICIENT = 0.98966 (95.67798)
PHI = 0.98779 (80.90549)

NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

TABLE THREE: Summary of Genova Analysis for Teacher Behaviour

GENOVA VERSION 2.1
D STUDY

DESIGN CXRXT

D STUDY DESIGN NUMBER 001-001

OBJECT OF MEASUREMENT :	C	FACETS :	R	T
G STUDY POPULATION SIZE :	INFINITE	G STUDY UNIVERSE SIZES :	INFINITE	INFINITE
D STUDY POPULATION SIZE :	INFINITE	D STUDY UNIVERSE SIZES :	INFINITE	21
D STUDY SAMPLE SIZE :	15	D STUDY SAMPLE SIZES :	3	21

	VARIANCE COMPONENTS IN TERMS OF G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES					VARIANCE COMPONENTS IN TERMS OF D STUDY UNIVERSE (OF GENERALIZATION) SIZES				
				VARIANCE COMPONENTS FOR MEAN SCORES					VARIANCE COMPONENTS FOR MEAN SCORES	
EFFECT	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS
C	1.22118	1.0000	1	1.22118	0.46306	1.30077	1.0000	1	1.30077	0.46300
R	0.00000	1.0000	3	0.00000	0.00018	0.00020	1.0000	3	0.00007	0.00015
T	0.40711	1.0000	21	0.02320	0.00873	0.40711QFM	0.0000	21	-------	-------
CR	0.01155	1.0000	3	0.00385	0.00229	0.02635	1.0000	3	0.00878	0.00227
CT	1.67157	1.0000	21	0.07960	0.00713	1.67157	0.0000	21	-------	-------
RT	0.00421	1.0000	63	0.00007	0.00009	0.00421	0.0000	63	-------	-------
CRT	0.31098	1.0000	63	0.00494	0.00029	0.31098	0.0000	63	-------	-------

QFM = QUADRATIC FORM

	VARIANCE	STANDARD DEVIATION	STANDARD ERROR OF VARIANCE
UNIVERSE SCORE	1.30077	1.14051	0.46300
EXPECTED OBSERVED SCORE	1.30956	1.14436	0.46300
LOWER CASE DELTA	0.00878	0.09373	0.00227
UPPER CASE DELTA	0.00885	0.09408	0.00212
MEAN	0.08737	0.29559	

GENERALIZABILITY COEFFICIENT = 0.99329 (########)
PHI = 0.99324 (########)

NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

TABLE FOUR: Summary of Genova Analysis for Student Behaviour

TABLE FIVE: Summary of Genova Analysis for Classroom Layout

GENOVA VERSION 2.1
D STUDY

DESIGN CxRxT

D STUDY DESIGN NUMBER 001-001

OBJECT OF MEASUREMENT :	C	FACETS :	R	T
G STUDY POPULATION SIZE :	INFINITE	G STUDY UNIVERSE SIZES :	INFINITE	INFINITE
D STUDY POPULATION SIZE :	INFINITE	D STUDY UNIVERSE SIZES :	INFINITE	8
D STUDY SAMPLE SIZE :	15	D STUDY SAMPLE SIZES :	3	8

	VARIANCE COMPONENTS IN TERMS OF G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES					VARIANCE COMPONENTS IN TERMS OF D STUDY UNIVERSE (OF GENERALIZATION) SIZES				
EFFECT	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	VARIANCE COMPONENTS FOR MEAN SCORES: ESTIMATES	VARIANCE COMPONENTS FOR MEAN SCORES: STANDARD ERRORS	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	VARIANCE COMPONENTS FOR MEAN SCORES: ESTIMATES	VARIANCE COMPONENTS FOR MEAN SCORES: STANDARD ERRORS
C	1.53827	1.0000	1	1.53827	0.59621	1.67994	1.0000	1	1.67994	0.59585
R	0.00000	1.0000	3	0.00000	0.00031	0.00079	1.0000	3	0.00026	0.00023
T	0.21569	1.0000	8	0.02946	0.01867	0.23569QFM	0.0000	8	-------	-------
CR	0.00176	1.0000	3	0.00059	0.00147	0.01615	1.0000	3	0.00538	0.00139
CT	1.13336	1.0000	8	0.14167	0.02072	1.13336	0.0000	8	-------	-------
RT	0.00632	1.0000	24	0.00026	0.00021	0.00632	0.0000	24	-------	-------
CRT	0.11511	1.0000	24	0.00480	0.00048	0.11511	0.0000	24	-------	-------

QFM = QUADRATIC FORM

	VARIANCE	STANDARD DEVIATION	STANDARD ERROR OF VARIANCE
UNIVERSE SCORE	1.67994	1.29612	0.59585
EXPECTED OBSERVED SCORE	1.68532	1.29820	0.59505
LOWER CASE DELTA	0.00538	0.07336	0.00139
UPPER CASE DELTA	0.00565	0.07514	0.00131
MEAN	0.11262	0.33559	

GENERALIZABILITY COEFFICIENT = 0.99681 (########)
PHI = 0.99665 (########)

NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

GENOVA VERSION 2.1
D STUDY

DESIGN CxRxT

D STUDY DESIGN NUMBER 001-001

OBJECT OF MEASUREMENT :	C	FACETS :	R	T
G STUDY POPULATION SIZE :	INFINITE	G STUDY UNIVERSE SIZES :	INFINITE	INFINITE
D STUDY POPULATION SIZE :	INFINITE	D STUDY UNIVERSE SIZES :	INFINITE	11
D STUDY SAMPLE SIZE :	15	D STUDY SAMPLE SIZES :	3	11

	VARIANCE COMPONENTS IN TERMS OF G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES					VARIANCE COMPONENTS IN TERMS OF D STUDY UNIVERSE (OF GENERALIZATION) SIZES				
				VARIANCE COMPONENTS FOR MEAN SCORES					VARIANCE COMPONENTS FOR MEAN SCORES	
EFFECT	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS
C	1.10219	1.0000	1	1.10219	0.42855	1.20528	1.0000	1	1.20528	0.42836
R	0.00166	1.0000	3	0.00055	0.00083	0.00216	1.0000	3	0.00072	0.00081
T	0.53131	1.0000	11	0.04830	0.02278	0.53131QFM	0.0000	11	-------	-------
CR	0.00000	1.0000	3	0.00000	0.00165	0.01887	1.0000	3	0.00629	0.00156
CT	1.13394	1.0000	11	0.10309	0.01299	1.13394	0.0000	11	-------	-------
RT	0.00551	1.0000	33	0.00017	0.00018	0.00551	0.0000	33	-------	-------
CRT	0.20762	1.0000	33	0.00629	0.00053	0.20762	0.0000	33	-------	-------

QFM = QUADRATIC FORM

	VARIANCE	STANDARD DEVIATION	STANDARD ERROR OF VARIANCE
UNIVERSE SCORE	1.20528	1.09783	0.42836
EXPECTED OBSERVED SCORE	1.21157	1.10071	0.42833
LOWER CASE DELTA	0.00629	0.07932	0.00156
UPPER CASE DELTA	0.00701	0.08373	0.00167
MEAN	0.08149	0.20547	

GENERALIZABILITY COEFFICIENT = 0.99401 (########)
PHI = 0.99422 (########)

NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

TABLE SIX: Summary of Genova Analysis for Classroom Environment

TABLE SEVEN: Summary of Genova Analysis for Program

GENOVA VERSION 2.1
D STUDY

DESIGN CxRxT

D STUDY DESIGN NUMBER 001-001

OBJECT OF MEASUREMENT :	C	FACETS :	R	T
G STUDY POPULATION SIZE :	INFINITE	G STUDY UNIVERSE SIZES :	INFINITE	INFINITE
D STUDY POPULATION SIZE :	INFINITE	D STUDY UNIVERSE SIZES :	INFINITE	19
D STUDY SAMPLE SIZE :	15	D STUDY SAMPLE SIZES :	3	19

	VARIANCE COMPONENTS IN TERMS OF G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES					VARIANCE COMPONENTS IN TERMS OF D STUDY UNIVERSE (OF GENERALIZATION) SIZES				
				VARIANCE COMPONENTS FOR MEAN SCORES					VARIANCE COMPONENTS FOR MEAN SCORES	
EFFECT	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	ESTIMATES	STANDARD ERRORS
C	1.31026	1.0000	1	1.31026	0.49071	1.30291	1.0000	1	1.30291	0.49066
R	0.00032	1.0000	3	0.00011	0.00032	0.00032	1.0000	3	0.00011	0.00032
T	0.69459	1.0000	19	0.03656	0.01318	0.694590FM	0.0000	19	--------	--------
CR	0.00367	1.0000	3	0.00122	0.00128	0.01454	1.0000	3	0.00488	0.00126
CT	1.30030	1.0000	19	0.07265	0.00677	1.30030	0.0000	19	--------	--------
RT	0.00000	1.0000	57	0.00000	0.00006	0.00000	0.0000	57	--------	--------
CRT	0.20036	1.0000	57	0.00366	0.00023	0.20036	0.0000	57	--------	--------

QFM = QUADRATIC FORM

	VARIANCE	STANDARD DEVIATION	STANDARD ERROR OF VARIANCE
UNIVERSE SCORE	1.30291	1.14197	0.49066
EXPECTED OBSERVED SCORE	1.30779	1.14004	0.49066
LOWER CASE DELTA	0.00488	0.06985	0.00126
UPPER CASE DELTA	0.00499	0.07061	0.00121
MEAN	0.09263	0.30435	

GENERALIZABILITY COEFFICIENT = 0.99648 (########)
PHI = 0.99641 (########)

NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

Analyses Including Grade Factor) in each of the five categories. Once this was established, the results were analyzed again in a "D study" or design study which excluded the grade factor and the statistics for rater reliability were calculated. It is the "D" study which is reflected in Tables Three to Seven.

c) Effect of Individual Question Items: After the Genova analysis revealed that grade had virtually no effect and that the rater reliability was very high, the author chose to use a different statistical analysis package since a package concentrating on multiple factors was no longer useful. The new package would concentrate on two factor data, in this case the classes and the items. The new analysis package would be capable of examining item correlation, subtest correlation, and reliability. To this end, the author selected the Lertaps Statistical Package.

Using the Lertaps Interpretation of Control Cards, each question item was tested to examine the degree of correlation with the overall results of the instrument for each of the three raters and then for the combined results of the three raters. While most items had a satisfactory correlation, some items did reflect low correlation. Refer to Table Eight: Item Analysis - Summary of Items With Low Correlation for a summary of the items in each category, for each rater, that

	Item Numbers (Subtest Correlation Numbers in Brackets)
Teacher Behaviour	#1-(0.284), #6-(-0.074), #11-(0.388)
Student Behaviour	#2-(0.142), #4-(0.194), #5-(0.364)
Classroom Layout	#3-(0.368)
Classroom Environment	#3-(0.384), #5-(0.103)
Program	#8-(0.226)

TABLE EIGHT: Item Analysis - Summary of Items With Correlations Lower Than 0.400 -Lertap Analysis From Combined Raters-

reflected low correlation. Refer to Appendices Five to Seven in order to examine the correlations of individual instrument items as defined by the observations of each of the three raters. Refer to Appendix Eight in order to examine the correlations of individual instrument items as defined by the combined observation results of the three raters.

d) Effect of Individual Category: Continuing to use the Lertaps Interpretation of Control Cards, each category was analyzed to examine the degree of correlation with the overall instrument. While all five categories had a high degree of correlation with the measurement of integration, there were small differences. On the combined results of the three raters, the categories and their correlations were ranked thus:

Student Behaviour	0.983
Programming	0.966
Teacher Behaviour	0.942
Classroom Environment	0.876
Classroom Layout	0.873

It would appear that, statistically, Student Behaviour was the most effective indicator of integrated programming. The difference among the five categories was so small, however, as to make all five categories useful indicators of integration.

There were slight variations from the above when the results of the three raters were examined individually. The difference was, again, so small and the agreement among the raters so high, that the results are insignificant in importance. However, for a complete comparison study, refer to Table Nine: Summary of Correlations for Individual Categories.

e) Correlation Across Categories: Information from the Lertaps Interpretation of Control Cards yielded correlation scores of category to category for each rater and for the combined results of the three. Interestingly, all categories were highly correlated with each other except for classroom layout which was noticeably less correlated with classroom environment for all three raters. Refer to the matrices in Tables Ten to Thirteen for the comparative analysis of inter-category correlations.

f) One Rater Reliability: An analysis was applied to determine the reliability of the instrument if only one rater was to perform the observation. In order to be consistent with the reliability scores already extracted from the data, the same multiple factors and the same statistical package was employed. This required that the Genova package analyze grade, classes, raters and items.

	Rater One	Rater Two	Rater Three	Combined Raters
Teacher Behaviour	0.941	0.940	0.951	0.942
Student Behaviour	0.977	0.983	0.989	0.983
Classroom Layout	0.879	0.859	0.885	0.873
Classroom Environment	0.874	0.882	0.877	0.876
Program	0.968	0.957	0.973	0.966

TABLE NINE: Summary of Correlation Between Individual Category and Entire Hansson Instrument -Genova Analysis per Rater-

VAR	1	2	3	4	5	6
1	1.000	0.889	0.709	0.894	0.904	0.941
2	0.889	1.000	0.894	0.795	0.927	0.977
3	0.709	0.894	1.000	0.671	0.815	0.879
4	0.894	0.795	0.671	1.000	0.797	0.874
5	0.904	0.927	0.815	0.797	1.000	0.968
6	0.941	0.977	0.879	0.874	0.968	1.000

TABLE TEN: Inter-category Correlation as per Rater One

VAR	1	2	3	4	5	6
1	1.000	0.901	0.715	0.917	0.858	0.940
2	0.901	1.000	0.900	0.818	0.920	0.983
3	0.715	0.900	1.000	0.598	0.780	0.859
4	0.917	0.818	0.598	1.000	0.803	0.882
5	0.858	0.920	0.780	0.803	1.000	0.957
6	0.940	0.983	0.859	0.882	0.957	1.000

TABLE ELEVEN: Inter-category Correlation as per Rater Two

In both Tables, 1 is Teacher Behaviour, 2 is Student Behaviour, 3 is Classroom Layout, 4 is Classroom Environment, 5 is Program, 6 is Total.

VAR	1	2	3	4	5	6
1	1.000	0.920	0.770	0.888	0.902	0.951
2	0.920	1.000	0.924	0.817	0.955	0.989
3	0.770	0.924	1.000	0.635	0.827	0.885
4	0.888	0.817	0.635	1.000	0.820	0.877
5	0.902	0.955	0.827	0.820	1.000	0.973
6	0.951	0.989	0.885	0.877	0.973	1.000

TABLE TWELVE: Inter-category Correlation as per Rater Three

VAR	1	2	3	4	5	6
1	1.000	0.902	0.727	0.895	0.886	0.942
2	0.902	1.000	0.904	0.809	0.934	0.983
3	0.727	0.904	1.000	0.633	0.806	0.873
4	0.895	0.809	0.633	1.000	0.805	0.876
5	0.886	0.934	0.806	0.805	1.000	0.966
6	0.942	0.983	0.873	0.876	0.966	1.000

TABLE THIRTEEN: Inter-category Correlation as per the Combined Three Raters

In both Tables, 1 is Teacher Behaviour, 2 is Student Behaviour, 3 is Classroom Layout, 4 is Classroom Environment, 5 is Program, 6 is Total.

The individual classroom had a variance component score of .95305 and the rater had a variance component score of .00546. The generalizability coefficient was .96960 indicating high reliability if there were only one rater. As expected, the individual classroom would remain the highly variant factor. Refer to Table Fourteen: Reliability Projection for One Rater for a summary analysis of one rater reliability projection.

Anecdotal Comments

The Hansson Instrument and accompanying definition of integrated curriculum programming for the junior division appeared to be statistically sound. The high degree of agreement among raters both in the validation and in the reliability checks and the high correlations of the five categories indicated that even for an initial study, much relevancy was reflected in the research.

It must be stated here how supportive and welcoming each classroom teacher was to the observers during the reliability tests. Their help, advice and genuine interest were greatly appreciated. It was also a very positive statement on their degree of professionalism. Informally, classroom teachers who reviewed the survey felt confident that they could use it themselves in an objective manner in order to identify areas of personal growth. This was very gratifying to hear since that is

TABLE FOURTEEN: Reliability Projection For One Rater
-Summary of Genova Analysis-

GENOVA VERSION 2.1
D STUDY

DESIGN CxRxT

D STUDY DESIGN NUMBER 001-001

OBJECT OF MEASUREMENT :	C	FACETS :	R T
G STUDY POPULATION SIZE :	INFINITE	G STUDY UNIVERSE SIZES :	INFINITE INFINITE
D STUDY POPULATION SIZE :	INFINITE	D STUDY UNIVERSE SIZES :	INFINITE 12
D STUDY SAMPLE SIZE :	15	D STUDY SAMPLE SIZES :	(1) (12)

	VARIANCE COMPONENTS IN TERMS OF G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES					VARIANCE COMPONENTS IN TERMS OF D STUDY UNIVERSE (OF GENERALIZATION) SIZES				
EFFECT	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	VARIANCE COMPONENTS FOR MEAN SCORES ESTIMATES	VARIANCE COMPONENTS FOR MEAN SCORES STANDARD ERRORS	VARIANCE COMPONENTS FOR SINGLE OBSERVATIONS	FINITE UNIVERSE CORRECTIONS	D STUDY SAMPLING FREQUENCIES	VARIANCE COMPONENTS FOR MEAN SCORES ESTIMATES	VARIANCE COMPONENTS FOR MEAN SCORES STANDARD ERRORS
C	0.82133	1.0000	1	0.82133	0.34086	0.95305	1.0000	1	0.95305	0.34049
R	0.00524	1.0000	1	0.00524	0.00532	0.00546	1.0000	1	0.00546	0.00529
T	0.42019	1.0000	12	0.03502	0.01746	0.42019QFM	0.0000	12	-------	-------
CR	0.00486	1.0000	1	0.00486	0.00797	0.02988	1.0000	1	0.02988	0.00772
CT	1.58065	1.0000	12	0.13172	0.01587	1.58065	0.0000	12	-------	-------
RT	0.00256	1.0000	12	0.00021	0.00056	0.00256	0.0000	12	-------	-------
CRT	0.30030	1.0000	12	0.02503	0.00201	0.30030	0.0000	12	-------	-------

QFM = QUADRATIC FORM

	VARIANCE	STANDARD DEVIATION	STANDARD ERROR OF VARIANCE
UNIVERSE SCORE	0.95305	0.97624	0.34049
EXPECTED OBSERVED SCORE	0.90294	0.99143	0.34052
LOWER CASE DELTA	0.02908	0.17207	0.00772
UPPER CASE DELTA	0.03534	0.18799	0.00892
MEAN	0.07099	0.26643	

GENERALIZABILITY COEFFICIENT = 0.96960 (31.89266)
PHI = 0.96425 (26.96050)

NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

the thrust of this thesis...not to prove whether integration works, but to identify criteria with which to gauge our own effectiveness in implementing the skills of this methodology.

Not only was visiting so many junior classrooms interesting, but the actual implementation of the instrument, the result of so many months of designing and editing, was an exhilarating experience. The author observed the growing feeling of ownership that the raters had in the project. Their advice and input into the actual practice of the instrument were invaluable.

CHAPTER SIX: SUMMARY AND CONCLUSIONS

Overview of the Project

The problem surveyed herein was the defining and identification of criteria of curriculum integration in the junior grades. The issue is particularly relevant at this time in the educational history of the Province of Ontario as it comes directly on the heels of the Junior Division Review (1985), and supports endeavours by the Ministry of Education to emphasize effective methodology.

The issue of curriculum integration was problematic in that a definition that was accepted and universally implemented by the teaching profession had not been documented. As a result, there was little in the way of concretely identified criteria of integrated curriculum, particularly in the junior division.

This project attempted to rectify these areas by defining curriculum integration as it affects the junior division and outline certain observable criteria which would reflect the manifestation of curriculum integration in the junior classroom.

The definition of curriculum integration, as designed by the study through the direct input of practicing educators in a field-based study, varied significantly from the traditional view in terms of its scope. It brought into play the dynamic interaction of three key elements in education. The final functional definition developed by the study was: Integrated curriculum programming in the junior class is the interdependent interaction of content, child-centred dynamics and teacher behaviour in a curriculum where all communication skills are interpreters of all data. The same field-based study identified very specific criteria categorized into five major sub-topics which indicated the degree of presence of curriculum integration. These sub-topics were teacher behaviour student behaviour classroom layout, classroom environment, and program.

The criteria were synthesized to produce an instrument, which when used as a measurement tool, might indicate the degree of integration in a single junior class, the junior classes of a school, the junior classes in the schools of an area, or even the junior classes of an entire jurisdiction.

There was found to be a high degree of agreement in the wording and intent of the items in the Hansson Instrument. There was also found to be an equally high

degree of reliability among the raters who used the instrument in fifteen junior classrooms indicating that the instrument was worded appropriately and specifically. All five categories were well balanced factors in reflecting curriculum integration and most question items were shown to be significant manifestations of integration.

Discussion

The instrument has two great strengths.

First and foremost, the Hansson Instrument articulates criteria for the significant area of integration of curriculum, where there were no articulated criteria before. It is the correction of a fault that has been long overdue particularly since it is a methodology to which leaders in the teaching profession give much credence.

Secondly, the functional definition and criteria are generated by educational professionals who represent a variety of job descriptions within the profession and who work for a variety of jurisdictions. This engenders a degree of universality and acceptance in that it is an educational concept defined by educators for the benefit of their clients.

All five categories or subtopics in the instrument were found to be reliable indicators of curriculum

integration. As these five categories were included in the three components of the definition, the untraditional definition of integration that was developed and the scope that it covered was legitimized.

There was a high degree of correlation across most of the five categories except for the correlation between classroom environment and classroom layout. This is a concern since both sub-topics are concerned with essentially the same thing, i.e., classroom accoutrements. One possible answer is a factor that the raters themselves brought forward. In order to be unobtrusive and not disturb the activity of the classroom they sometimes sat in one place for the duration of the observation. As a result, they found that if they did not move around the classroom there were things that they did not see. This would, therefore, give results for a particular sub-topic which were perhaps not consistent with overall results. This would be particularly true for an area like Classroom Environment, the items of which may be oriented to certain locations in the classroom, and to view them would require careful observation skills.

There were certain items in the instrument that were found to be of less value in measuring curriculum integration. These are the low correlating items

listed in Table Eight. The high degree of rater-reliability would suggest that these items be edited or deleted altogether. It is the author's suggestion that this not be done until results from a much greater number of instrument users indicate the same low correlation of these items.

The author is, of course, pleased at the high degree of agreement among the three raters who used the instrument during the reliability study. This indicates the appropriateness of the instrument both in wording and in content. While it is pleasing that the instrument is relevant, the extremely high correlation scores among the raters poses additional questions.

a) Were the raters a true cross-sample of educators?

b) Did the two trial sessions which were only meant to familiarize the raters with the mechanics of the reliability test influence to some degree their impartiality?

Both these questions are areas for further study and development.

One weakness of the instrument, as with all instruments, is the use to which it may be put. It was with the greatest chagrin that the author heard that certain administrative professionals "loved the survey" because they could use it as a measuring stick when doing teacher performance appraisals. This is

certainly not the intent of the instrument. It is merely an indicator of performance in a methodology in order that we, as a profession, know in what direction and how far we have yet to go.

The author is very aware of the raw nature of the findings in this study. It has been stated from the very first that this piece of work is and must be accepted as a preliminary exploration into this particular area of methodology. It has given the teaching profession a foot-hold, a place from which to continue. There is an emphasis in the validity and reliability checks of the instrument on the urban environment in south central Ontario. Would the instrument achieve the same results when used in other areas?

Yet, when viewed in its entirety, the mandate of the study has been achieved. The instrument reflects a high degree of relevancy from its initial design to the completed product.

Suggestions for Practice

The classroom observers noted several items which would affect the actual use of the instrument. These were accepted and amalgamated with the instructions for the instrument as presented in Appendix Two.

The observers found that twenty minutes observation time was too much. They felt that the instrument would be more easily used if the time was not restricted to such a long duration. While this specific time duration was chosen primarily for the purposes of reliability testing, the point they had made was accepted. The instructions for the general use of the instrument were therefore expanded with suggestions of differing observation times for a variety of occasions, and no specific time was given.

The observers also found that it was important to move around the classroom when doing an observation with the instrument. Staying quietly in one corner, even if only trying to be unobtrusive, often meant the observer was missing the interaction of the students, or some significant part of the classroom. (This may have accounted for some of the areas of disagreement found between the observers during the reliability check in that one observed an event from her/his vantage point, where another observer in another section of the classroom missed it totally.)

The observers suggested that when the instrument is employed by administrative personnel, it be done several times in the year. All of the items in the instrument may be occurring in a specific classroom,

but they may not all be occurring at the same time, let alone when the instrument is being applied.

Lastly, as mentioned in a preceding section, the author wishes to voice a caution that the survey be used only for the reasons for which it was intended.

Suggestions for Future Developments

There are four directions that the author would particularly like to pursue in extending the findings of this study.

One direction is the active implementation of the Hansson Instrument. This would include its vigorous use across whole jurisdictions such as boards of education, regions, or the province as a whole. Much information regarding curriculum integration in the junior grades could be uncovered in this way. An example might be the identification and examination of the five specific implementation categories, as identified by the use of the instrument, that are consistently underdeveloped within jurisdictions. This would provide impetus for relevant in-service training for teaching professionals and clearly stated growth objectives for those jurisdictions. Such an extensive use of the instrument with a subsidiary aim to a more robust assessment of its validity and reliability is also desirable. This would help define the degree of

usefulness of the low-correlating items (Table Eight) as well as lend credence to the usefulness of the test as a whole.

A second direction is the written articulation of a comprehensive set of implementation guidelines for establishing curriculum integration in the individual junior classroom. The document would be based on the items already identified in the Hansson Instrument and would give the individual teacher the same calibre of resources as The Formative Years (1975) or Science in Primary and Junior Education (1986) gave. This would likely be best accomplished in a team approach where the synergy of ideas would generate pragmatic and developmentally sound guidelines.

A third, and more challenging direction would be the examination of the degree of integration across the curriculum of specific subject disciplines. Using the Hansson Instrument as a starting point, another instrument, aimed at one subject, would be developed to measure the degree of integration of that subject. This would give educators a tool to measure how well mathematics was used across the curriculum, or expressive written language or visual arts or computer implementation. In this way, elements of the totality of knowledge, defined by the curriculum of the junior division, could be examined as units while still

acknowledging their intrinsic inter-relationship and interdependence with the full spectrum of knowledge.

A fourth direction, and one that has been alluded to since the beginning of this study, is further research into an effective definition of integrated curriculum and an extended set of criteria with which to identify and measure the degree of implementation of integrated curriculum. In this pursuit, the Hansson Instrument would perhaps only be a reference and not the foundation to the study as were the former three directional items.

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APPENDIX ONE

INITIAL QUESTIONNAIRE USED IN FIELD-BASED STUDY TO DETERMINE CRITERIA FOR CURRICULUM INTEGRATION

NAME: _____

POSITION: _____

BOARD FOR WHICH YOU WORK: _____

1. Please describe what an **integrated curriculum programming approach** in grade four (4) to grade six (6) means to you.

2. Please list the aspects of such an integrated program that you would look for in a classroom.

Please use more paper if you so wish. Additional comments are welcome.
Kindly return to: Mr. Torry Hansson,
Perth Avenue School, Toronto Board

APPENDIX TWO

THE HANSSON INSTRUMENT FOR THE MEASUREMENT OF CURRICULUM INTEGRATION FOR THE JUNIOR CLASSROOM

THE HANSSON INSTRUMENT FOR THE MEASUREMENT OF CURRICULUM INTEGRATION FOR THE JUNIOR CLASSROOM

An instrument to measure the degree of integrated curriculum programming actively occuring in a junior classrom.

Author: Torry L. Hansson

THE HANSSON INSTRUMENT FOR THE MEASUREMENT OF CURRICULUM INTEGRATION FOR THE JUNIOR CLASSROOM

This survey explores junior curriculum integration as reflected in 5 classroom areas:

Teacher Behaviour
Student Behaviour
Classroom Layout
Classroom Environment
Programming

PROCEDURAL INSTRUCTIONS

1. Observe a junior classroom. The observation must be done while students are present.

2. Focus on one of the five areas of the survey at a time. Spend several minutes observing the elements of that area only.

3. Circle a number (one [1], three [3], or five [5]) in each statement according to the degree in which you concur. You may do this during your observation time and/or afterward.

N/O 1.....3.....5
A
Not Observed Little Average great deal

4. If there is a survey item that you do not observe because of some factor preventing that observation, then circle N/O. ie: An observation during a traditional whole-class lesson would prevent the observation of peer interaction of students.

5. Take a short rest period, and continue with the next area in the same manner. When finished, score your instrument according to the scoring instructions.

6. Read the cautionary remarks on the following page before you begin using the instrument.

IMPORTANT

READ THIS BEFORE USING THE INSTRUMENT

1. The amount of time that you will need to do the actual observation will vary upon your own timetable and the demands to which the instrument is being put.

If you are a teacher assessing your own classroom you will not need as much time observing in each category as perhaps an administrator using the instrument in a classroom with which s/he is unfamiliar.

Assess your needs before you begin and try to make the time spent on each of the five categories equal.

2. Move around the classroom as you are observing in order that you see things that you may miss if you are sitting in one place.

3. If you are an administrator, try to use the instrument two or three times a year in each classroom in order to make a fair appraisal. Sometimes activities that we want to see are not occurring during the observation time.

4. **REMEMBER:** This is an instrument to measure curriculum integration in a juniour classroom. The author does not advise that it be used as a measure of a teacher's performance!

TEACHER BEHAVIOUR

Teacher Behaviour is characterized by observable teacher dynamics which facilitate the implementation of the components of integrated curriculum.

1. There is evidence of highly structured planning by the teacher with clear short and long-term objectives and activities that support those objectives.

N/O 1....3....5

2. The teacher uses informal observation as part of student evaluation.

N/O 1....3....5

3. There is a low percentage of teacher talk during activity periods.

N/O 1....3....5

4. There is evidence that the teacher uses both formal and informal evaluations.

N/O 1....3....5

5. The teacher is in full control of the classroom situation.

N/O 1....3....5

6. The teacher provides opportunities for small group activities.

N/O 1....3....5

7. The overlapping of curriculum disciplines is reflected in centres or displays where more than one subject area deals with a central theme.

N/O 1....3....5

8. The teacher is able to change his/her pace or plans spontaneously.

N/O 1....3....5

9. The teacher accommodates individual student capabilities by accepting a variety of work quality.

N/O 1....3....5

10. The teacher approaches the "whole child" in order zto capitalize on the individual student's personal experiences.

N/O 1....3....5

11. The teacher plans and reinforces routines and rules.

N/O 1....3....5

12. The teacher demonstrates to the students that s/he trusts and respects them by the responsibility she gives them and the manner in which she speaks to them.

N/O 1....3....5

STUDENT BEHAVIOUR

Student Behaviour is characterized by observable student dynamics which reflect the intent of the classroom program. Examples might be the students' written work, the degree of ongoing peer interaction during activity periods and the level of student ownership in the program.

1. There is evidence of peer teaching.

N/O 1....3....5

2. There are few discipline difficulties.

N/O 1....3....5

3. There is evidence of student self-discipline.

N/O 1....3....5

4. The pupils are task-focussed.

N/O 1....3....5

5. There is pupil interaction.

N/O 1....3....5

6. The students are able to capitalize on their personal home experiences, by applying them to their school activities.

N/O 1....3....5

7. The classroom is child-centred.

N/O 1....3....5

8. There is evidence that students have some input in planning aspects of the program which provides them with a degree of ownership.

N/O 1....3....5

9. The students research, take notes, observe and/or report.

N/O 1....3....5

10. The spontaneous conversation of the students shows that they have become in-house experts in their current theme by their continuous and knowledgeable references to concepts in that theme.

N/O 1....3....5

11. The children have freedom of movement in their classroom.

N/O 1....3....5

12. There is evidence that group reporting takes place.

N/O 1....3....5

13. Original student work is the primary type of display in the classroom.

N/O 1....3....5

14. The students have independent access to everyday materials required to produce their work.

N/O 1....3....5

15. The students have some responsibility keeping personal records. eg: storywriting folders, charts, logs, journals, etc.

N/O 1....3....5

16. The students engage in both large and small group activities.

N/O 1....3....5

17. The students are involved in some form of self-evaluation.

N/O 1....3....5

18. The students are involved in some form of peer-evaluation.

N/O 1....3....5

19. The students have a degree of choice regarding the order or the type of activities they do.

N/O 1....3....5

20. The students may organize their own time within the confines of the daily classroom routine.

N/O 1....3....5

21. Students may progress at their own rate within the general confines of the daily classroom schedule.

N/O 1....3....5

CLASSROOM LAYOUT

Classroom Layout is characterized by the "hardware" of the classroom. The type of furniture and its arrangement might be considerations in this area.

1. The classroom has learning centres.

N/O 1....3....5

2. The classroom has concrete materials.

N/O 1....3....5

3. There is evidence of computers in the classroom.

N/O 1....3....5

4. In the room, there are areas that promote interaction and areas that are conducive to more quiet reflection.

N/O 1....3....5

5. The room arrangement is flexible.

N/O 1....3....5

6. Other areas of the school are used for class work (ie: halls, stairwell, empty rooms, office, etc).

N/O 1....3....5

7. The desks are arranged in groups.

N/O 1....3....5

8. The room is conducive to easy movement by the students in terms of traffic flow.

N/O 1....3....5

CLASSROOM ENVIRONMENT

Classroom Environment is characterized by the tangible elements of program which supports the intent of the classroom layout. This might include resource material and the functional use of the classroom arrangement.

1. There is a variety of learning materials.

N/O 1....3....5

2. There is an abundance of reference materials available to the student.

N/O 1....3....5

3. There is evidence that a variety of audio-visual aids have been used (ie: films, video, music).

N/O 1....3....5

4. There is evidence of a variety of print material related to the current theme in the classroom (filmstrips, books, posters).

N/O 1....3....5

5. There is computer software available to the students that is relevant to the current theme.

N/O 1....3....5

6. The work of the children is displayed.

N/O 1....3....5

7. Students can access some of their own records (writing folders, artwork, tests) in readily available storage units.

N/O 1....3....5

8. There is evidence of a wide range of reading levels in the print material in the classroom.

N/O 1....3....5

9. The class goes on fieldtrips.

N/O 1....3....5

10. There is a classroom library.

N/O 1....3....5

11. The classroom environment encourages individual creativity .

N/O 1....3....5

PROGRAMMING

Programming is characterized by the somewhat intangible elements of the classroom curriculum. This might include methodolgy, student ownership of program and articulated aims and objectives.

1. There is a balance of types of activity situations (ie: active vs. quiet study).

N/O 1....3....5

2. There is evidence of activity with a purpose.

N/O 1....3....5

3. There is evidence that students are involved in planning the program.

N/O 1....3....5

4. Target dates, goals, and objectives are clearly laid down.

N/O 1....3....5

5. There is evidence of emphasis on expressive and receptive areas of language arts.

N/O 1....3....5

6. The program follows a thematic approach.

N/O 1....3....5

7. There are multiple evaluation procedures (ie:formative, summative).

N/O 1....3....5

8. The objectives are clear for both the teacher and the students.

N/O 1....3....5

9. The librarian has been involved in the implementation and/or organization of the theme.

N/O 1....3....5

10. There is ample opportunity for discussion and interaction on the part of the students.

N/O 1....3....5

11. There is ample opportunity for reporting by groups of students to their peers.

N/O 1....3....5

12. There is evidence of both small and large group activities.

N/O 1....3....5

13. The classroom timetable reflects blocks of time for activities.

N/O 1....3....5

14. The program approaches the theme in a holistic manner.

N/O 1....3....5

15. The program supports and reinforces the whole language approach.

N/O 1....3....5

16. There is evidence of parental involvement in the implementation of the classroom program.

N/O 1....3....5

17. The classroom uses the "writing process" as reflected in the use of procedures such as writing, editing, conferencing and publishing.

N/O 1....3....5

18. There is evidence of cooperative learning in that groups of 2 to 4 students are working together on one project.

N/O 1....3....5

19. The classroom activities promote observation, classification, seriation, and correspondence.

N/O 1....3....5

20. There are classroom routines that contribute to the development of responsibility and independence

N/O 1....3....5

SCORING YOUR OBSERVATION

THE HANSSON INSTRUMENT FOR THE MEASUREMENT OF CURRICULUM INTEGRATION FOR THE JUNIOR CLASSROOM

The scoring procedures on the following pages will allow the observer to analyze the data from an observation.

The scoring facilitates the subtotal measurement of curriculum integration, category by category, or the total measurement of curriculum integration. This flexibility will allow the observer to focus on certain categories or view integration more globally.

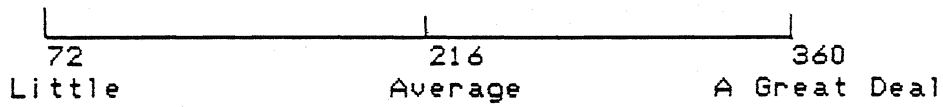
There are two steps to scoring the Hansson Instrument. First, a personal point-boundary must be calculated and secondly, your personal data must be compared to it.

Personal Point-Boundary

1. There are three qualitative achievement levels in the Hansson Instrument: Little Integration
Average Integration
A Great Deal of Integration.

There are, of course, points in between these areas. The point-boundary between each level changes with the number of N/O's recorded. The following table demonstrates the optimum point-boundary for each category if no N/O's are recorded.

	Little	Average	Great Deal
Teacher Behaviour	12	36	60
Student Behaviour	21	63	105
Classroom Layout	8	24	40
Classroom Environment	11	33	55
Program	20	60	100
TOTAL	72	216	360



Scale for Integration
-Optimum Point Spread-

According to this sample data, point-totals close to 72 indicate little curriculum integration; point-totals close to 216 indicate average degrees of curriculum integration; point-totals close to 360 indicate a high degree of curriculum integration.

2. To obtain the point-boundaries for the three achievement levels for your data, you will complete the chart below, Point-Boundary Data - A.

Count the N/O's that you have recorded for Teacher Behaviour. Place that number on the three blanks inside the brackets in the Teacher Behaviour section on the chart below and complete the three simple algorithms.

Count the N/O's that you have recorded for Student Behaviour. Place that number on the three blanks inside the brackets in the Student Behaviour section on the chart below and complete the three simple algorithms.

Do the same for the next four sections.

This will give you your personal point-boundaries with which to compare your Instrument score.

POINT-BOUNDARY DATA - A

(A) For Teacher Behaviour

Little Integration: 12 - (_____ x 1) = _____
Average Integration: 36 - (_____ x 3) = _____
A Great Deal: 60 - (_____ x 5) = _____

(B) For Student Behaviour

Little Integration: 21 - (_____ x 1) = _____
Average Integration: 63 - (_____ x 3) = _____
A Great Deal: 105 - (_____ x 5) = _____

(C) For Classroom Layout

Little Integration: 8 - (_____ x 1) = _____
Average Integration: 24 - (_____ x 3) = _____
A Great Deal: 40 - (_____ x 5) = _____

(D) For Classroom Environment

Little Integration: 11 - (_____ x 1) = _____
Average Integration: 33 - (_____ x 3) = _____
A Great Deal: 55 - (_____ x 5) = _____

(E) For Programming

Little Integration: 20 - (_____ x 1) = _____
Average Integration: 60 - (_____ x 3) = _____
A Great Deal: 100 - (_____ x 5) = _____

(F) FOR TOTAL

Little Integration: 72 - (_____ x 1) = _____
Average Integration: 216 - (_____ x 3) = _____
A great Deal: 360 - (_____ x 5) = _____

Comparing Your Data

1. Enter your observation score totals on the chart on the next page, titled Scoring Your Data - B.

2. On the same chart Scoring Your Data - B, enter your personal point boundaries that you have calculated from the previous page, Point-Boundary Data - A.

3. Place your three total values on the on the appropriate place on the Scale of Integration.

4. Compare your results. How integrated is the classroom with which this observation dealt?

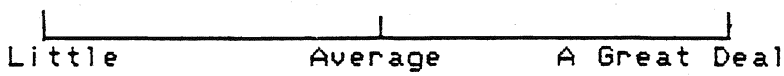
5. Note that there are six total-columns (A - F). This allows you to examine the degree of integration for each of the categories (A - E) as well as the total (F). Depending upon your needs, you may wish to have only a total score rather than a category by category breakdown. If this is the case, then complete column F only.

SCORING YOUR DATA - B

Fill in all the blanks on the summary chart below, with the data you have generated from this observation.

The six alphabet letters across the top of the summary chart refer to the five categories plus the total column on the page...Scoring your Data - A.

	A	B	C	D	E	F
Your Score						
Your Boundary for Little Integration						
Your Boundary for Average Integration						
Your Boundary for A Great Deal Integration						



Your Personal Scale of Integration

APPENDIX THREE

VALIDATION PACKAGE FOR HANSSON INSTRUMENT SENT TO

TEACHERS, CONSULTANTS AND PRINCIPALS

Note: For this appendix, package is exclusive of

Instrument

Validation Procedure For

HANSSON SURVEY OF CURRICULUM INTEGRATION FOR THE JUNIOR CLASSROOM

Dear Evaluator:

Firstly, please accept my sincerest gratitude. I know that you are busy and have several thousand other things to do. But your continuing support is much appreciated. I need your professional expertise for the following validation.

INSTRUCTIONS

1. Carefully read the definition of integration as defined by this paper. The definition is the basis of your evaluation.

2. There are six sections to the survey. They are:

Instructions
Teacher Behaviour
Student Behaviour
Classroom Layout
Classroom Environment
Programming

Please answer the questions on the response sheet provided for each of the five categories and the instructions..

3. It is important that you realize that you do not need to perform the survey. The purpose of your exercise is merely to examine the appropriateness of the wording and the categories.

4. A space for comments has been provided. You may or may not elect to use this space.

5. This validation looks like a lot of paper! Actually, that's all it really is...a lot of paper. I have put each section on a separate sheet of paper in order to avoid confusion.

Thanks,

Torry Hansson

CURRICULUM INTEGRATION IN THE JUNIOR GRADES

VALIDATION RESOURCES FOR RESPONDENTS

Re: The Hansson Instrument for the Measurement of Curriculum Integration for the Juniour Grades

Background

Questionnaires were sent out to numerous educators. These questionnaires asked the educators to describe not only what integrated junior curriculum meant to them, but what aspects of an integrated program they would look for in a classroom. Their collective answers were compiled and edited until they became the basis of the Hansson Instrument which is part of this validation package.

The respondents unanimously described integrated junior curriculum as a function of interactive elements of the teacher's behaviour, the student's behaviour, the classroom layout, the classroom environment, and programming. Therefore, both the working definition and the survey items had to reflect these points of view.

Definition

Curriculum integration in the juniour grades is an interdependent, interaction of the respective elements of:

a) a teacher's behaviour
b) a student's behaviour
c) the classroom layout
d) the classroom environment
e) the programming.

It is, therefore, more than just a transfer of pure knowledges or skills. It is a complex function of five educational principles.

VALIDATION RESPONSE SHEET 1

Please answer the following questions as completely as possible.

Section: General Instructions

1. The instructions are clear as to the mechanics of the survey.

T F

Comments:

2. The instructions give sufficient guidance without prejudicing the user.

T F

Comments:

VALIDATION RESPONSE SHEET 2

Section: Teacher's Behaviour

1. You feel the question clearly stated its intent.

T F

Comments:

2. Each question in this section dealt directly with the Teacher's Behaviour in some way.

T F

Comments:

3. There were no questions that were duplications of other questions in this same section.

T F

If TRUE go on to question 4.
If FALSE, answer question A and B.

A) The duplicated items were _____.

B) If there was a duplication, did it reflect the (circle one):
(i) necessary overlap of certain educational elements
or
(ii) needless reiteration of the same concept

Comments:

4. As per the definition of Integrated Junior Curriculum that we have adopted, each question in this section was appropriate as a partial means of measuring integration.

T F

If TRUE, go to the next section.
If FALSE, answer question C.

C) The inappropriate questions in this section were: _____.

Comments:

Thank you. Please go to the next section.

VALIDATION RESPONSE SHEET 3

Section: Student's Behaviour

1. You feel the question clearly stated its intent.

T F

Comments:

2. Each question in this section dealt directly with the Student's Behaviour in some way.

T F

Comments:

3. There were no questions that were duplications of other questions in this same section.

T F

If **TRUE** go on to question 4.
If **FALSE**, answer question A and B.

A) The duplicated items were _____.

B) If there was a duplication, did it reflect the (circle one):
(i) necessary overlap of certain educational elements
or
(ii) needless reiteration of the same concept

Comments:

4. As per the definition of Integrated Junior Curriculum that we have adopted, each question in this section was appropriate as a partial means of measuring integration.

T F

If **TRUE**, go to the next section.
If **FALSE**, answer question C.

C) The inappropriate questions in this section were:
_____.

Comments:

Thank you. Please go to the next section.

VALIDATION RESPONSE SHEET 4

Section: Classroom Layout

1. You feel the question clearly stated its intent.

T F

Comments:

2. Each question in this section dealt directly with the Classroom Layout in some way.

T F

Comments:

3. There were no questions that were duplications of other questions in this same section.

T F

If TRUE go on to question 4.
If FALSE, answer question A and B.

A) The duplicated items were _____.

B) If there was a duplication, did it reflect the (circle one):
(i) necessary overlap of certain educational elements
or
(ii) needless reiteration of the same concept

Comments:

4. As per the definition of Integrated Junior Curriculum that we have adopted, each question in this section was appropriate as a partial means of measuring integration.

T F

If TRUE, go to the next section.
If FALSE, answer question C.

C) The inappropriate questions in this section were:
_____.

Comments:

Thank you. Please go to the next section.

VALIDATION RESPONSE SHEET 5

Section: Classroom Environment

1. You feel the question clearly stated its intent.

T F

Comments:

2. Each question in this section dealt directly with the Classroom Environment in some way.

T F

Comments:

3. There were no questions that were duplications of other questions in this same section.

T F

If **TRUE** go on to question 4.
If **FALSE**, answer question A and B.

A) The duplicated items were _____.

B) If there was a duplication, did it reflect the (circle one):
(i) necessary overlap of certain educational elements
or
(ii) needless reiteration of the same concept

Comments:

4. As per the definition of Integrated Junior Curriculum that we have adopted, each question in this section was appropriate as a partial means of measuring integration.

T F

If **TRUE**, go to the next section.
If **FALSE**, answer question C.

C) The inappropriate questions in this section were:
_____.

Comments:

Thank you. Please go to the next section.

VALIDATION RESPONSE SHEET 6

Section: Programming

1. You feel the question clearly stated its intent.

T F

Comments:

2. Each question in this section dealt directly with Programming in some way.

T F

Comments:

3. There were no questions that were duplications of other questions in this same section.

T F

If TRUE go on to question 4.
If FALSE, answer question A and B.

A) The duplicated items were _____.

B) If there was a duplication, did it reflect the (circle one):
(i) necessary overlap of certain educational elements
or
(ii) needless reiteration of the same concept

Comments:

4. As per the definition of Integrated Junior Curriculum that we have adopted, each question in this section was appropriate as a partial means of measuring integration.

T F

If TRUE, go to the next section.
If FALSE, answer question C.

C) The inappropriate questions in this section were:
_____.

Comments:

You are finished! You have achieved automatic promotion to the Educational Hall Of Fame. Thank you so much.

APPENDIX FOUR

SUMMARY OF GENOVA ANALYSIS INCLUDING GRADE FACTOR FOR EACH CATEGORY

Genova Analysis of Teacher Behaviour
-Including Grade Effect-

GENOVA VERSION 2.1
G STUDY

HANSON SURVEY OF CURRICULUM INTEGRATION

G STUDY RESULTS

(** = INFINITE)	G	C	R	T
SAMPLE SIZE	3	5	3	12
UNIVERSE SIZE	*****	*****	*****	*****

EFFECT	DEGREES OF FREEDOM	MODEL VARIANCE COMPONENTS USING ALGORITHM	USING EMS EQUATIONS	STANDARD ERROR
G	2	(0.0)	(0.0)	0.0919742
C:G	12	0.9183502	0.9183502	0.4059130
R	2	0.0060269	0.0051122	0.0053538
T	11	0.4783670	0.4104938	0.2096920
GR	4	(0.0)	(0.0)	0.0029914
GT	22	(0.0)	(0.0)	0.0647692
CR:G	24	0.0068182	0.0068182	0.0090790
CT:G	132	1.7260943	1.7260943	0.2232473
RT	22	0.0023064	0.0023064	0.0077696
GRT	44	0.0008923	0.0008923	0.0137063
CRT:G	264	0.2996633	0.2996633	0.0259841

NOTE: THE "ALGORITHM" AND "EMS" ESTIMATED VARIANCE COMPONENTS WILL BE IDENTICAL IF THERE ARE NO NEGATIVE ESTIMATES

Note: G = Grade C:G = Class R = Rater
T = Item

Genova Analysis of Student Behaviour
-Including Grade Effect-

GENOVA VERSION 2.1
G STUDY

HANSSON SURVEY OF CURRICULUM INTEGRATION

G STUDY RESULTS

(** = INFINITE)	G	C	R	T
SAMPLE SIZE	3	5	3	21
UNIVERSE SIZE	*****	*****	*****	*****

		MODEL VARIANCE COMPONENTS		
EFFECT	DEGREES OF FREEDOM	USING ALGORITHM	USING EMS EQUATIONS	STANDARD ERROR
G	2	(0.0)	(0.0)	0.1151683
C:G	12	1.4174471	1.4174471	0.5709961
R	2	(0.0)	(0.0)	0.0009727
T	20	0.5254709	0.4793078	0.1838801
GR	4	(0.0)	(0.0)	0.0031801
GT	40	(0.0)	(0.0)	0.0641011
CR:G	24	0.0130026	0.0130026	0.0074881
CT:G	240	1.7674735	1.7674735	0.1695788
RT	40	(0.0)	(0.0)	0.0070961
GRT	80	0.0295000	0.0295000	0.0141636
CRT:G	400	0.2899074	0.2899074	0.0186746

NOTE: THE "ALGORITHM" AND "EMS" ESTIMATED VARIANCE COMPONENTS WILL BE IDENTICAL IF THERE ARE NO NEGATIVE ESTIMATES

Note: G = Grade C:G = Class R = Rater
T = Item

Genova Analysis of Classroom Layout
-Including Grade Effect-

GENOVA VERSION 2.1
G STUDY

HANSSON SURVEY OF CURRICULUM INTEGRATION

G STUDY RESULTS

(** = INFINITE)	G	C	R	T
SAMPLE SIZE	3	5	3	8
UNIVERSE SIZE	****	****	****	****

EFFECT	DEGREES OF FREEDOM	MODEL VARIANCE COMPONENTS — USING ALGORITHM	USING EMS EQUATIONS	STANDARD ERROR
G	2	(0.0)	(0.0)	0.1493430
C:G	12	1.7859127	1.7859127	0.7306114
R	2	(0.0)	(0.0)	0.0009775
T	7	0.2318651	0.2331261	0.1516490
GR	4	(0.0)	(0.0)	0.0015844
GT	14	0.0133730	0.0095899	0.0928395
CR:G	24	0.0017857	0.0017857	0.0050512
CT:G	84	1.1238095	1.1238095	0.1776985
RT	14	0.0095635	0.0057804	0.0050784
GRT	28	(0.0)	(0.0)	0.0043504
CRT:G	168	0.1232143	0.1232143	0.0133645

NOTE: THE "ALGORITHM" AND "EMS" ESTIMATED VARIANCE COMPONENTS WILL BE IDENTICAL IF THERE ARE NO NEGATIVE ESTIMATES

Note: G = Grade C:G = Class R = Rater
T = Item

Genova Analysis of Classroom Environment
-Including Grade Effect-

GENOVA VERSION 2.1
G STUDY

HANSSON SURVEY OF CURRICULUM INTEGRATIO

G STUDY RESULTS

(** = INFINITE)	G	C	R	T
SAMPLE SIZE	3	5	3	11
UNIVERSE SIZE	****	****	****	****

		MODEL VARIANCE COMPONENTS		
EFFECT	DEGREES OF FREEDOM	USING ALGORITHM	USING EMS EQUATIONS	STANDARD ERROR
G	2	(0.0)	(0.0)	0.1297443
C:G	12	1.2036869	1.2036869	0.4973096
R	2	0.0029697	0.0014916	0.0025048
T	10	0.5384848	0.5301178	0.2514165
GR	4	(0.0)	(0.0)	0.0016780
GT	20	(0.0)	(0.0)	0.0742695
CR:G	24	0.0024747	0.0024747	0.0058772
CT:G	120	1.1518687	1.1518687	0.1560267
RT	20	0.0014747	0.0014747	0.0070194
GRT	40	0.0141313	0.0141313	0.0122430
CRT:G	240	0.1975253	0.1975253	0.0179568

NOTE: THE "ALGORITHM" AND "EMS" ESTIMATED VARIANCE COMPONENTS WILL BE IDENTICAL IF THERE ARE NO NEGATIVE ESTIMATES

Note: G = Grade C:G = Class R = Rater
T = Item

GENOVA VERSION 2.1
G STUDY

HANSSON SURVEY OF CURRICULUM INTEGRATION

G STUDY RESULTS

(## = INFINITE)	G	C	R	T
SAMPLE SIZE	3	5	3	19
UNIVERSE SIZE	#####	#####	#####	#####

EFFECT	DEGREES OF FREEDOM	MODEL VARIANCE COMPONENTS USING ALGORITHM	USING EMS EQUATIONS	STANDARD ERROR
G	2	(0.0)	(0.0)	0.1220203
C:G	12	1.5320663	1.5320663	0.6088849
R	2	0.0001754	0.0000062	0.0012007
T	18	0.7062443	0.6918389	0.2509920
GR	4	0.0006368	0.0006368	0.0024062
GT	36	(0.0)	(0.0)	0.0656989
CR:G	24	0.0032164	0.0032164	0.0039087
CT:G	216	1.4088694	1.4088694	0.1414700
RT	36	(0.0)	(0.0)	0.0040561
GRT	72	0.0088369	0.0088369	0.0085481
CRT:G	432	0.2020468	0.2020468	0.0137158

NOTE: THE "ALGORITHM" AND "EMS" ESTIMATED VARIANCE COMPONENTS WILL BE IDENTICAL IF THERE ARE NO NEGATIVE ESTIMATES

Note: G = Grade C:G = Class R = Rater
T = Item

APPENDIX FIVE

ITEM ANALYSIS FOR RATER ONE

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	5	33.3
5	3.0	8	53.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.400	0.737	0.311	0.282	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	5	33.3
5	3.0	7	46.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.200	0.941	0.567	0.631	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	4	26.7
5	3.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.800	0.862	0.638	0.665	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	6	40.0
5	3.0	5	33.3
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.000	0.926	0.513	0.471	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	2	13.3
5	3.0	10	66.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.467	0.834	0.426	0.469	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	6	40.0
5	3.0	2	13.3
OTHER	0.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	1.113	-0.139	0.186	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	3	20.0
5	3.0	2	13.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	0.900	0.864	0.827	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	10	66.7
5	3.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.200	0.561	0.569	0.757	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	3	20.0
5	3.0	7	46.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	0.915	0.602	0.670	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	7	46.7
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.800	0.862	0.604	0.687

LERTAP 2.0

SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	4	26.7
5	3.0	10	66.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.600	0.632	^.539	0.530

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	7	46.7
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.267	0.704	0.670	0.664

LERTAP 2.0

SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	4	26.7
5	3.0	4	26.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.733	0.961	0.771	0.793

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	5	33.3
5	3.0	7	46.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.267	0.799	0.137	0.257

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	4	26.7
5	3.0	7	46.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.200	0.862	0.451	0.538

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	3	20.0
5	3.0	11	73.3
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.667	0.617	0.105	0.257

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	2	13.3
5	3.0	6	40.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.867	1.060	0.375	0.340

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	2	13.3
5	3.0	2	13.3
OTHER	0.0	8	53.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
0.867	1.125	0.843	0.836	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	11	73.3
5	3.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	0.516	0.594	0.540	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	3	20.0
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.533	0.915	0.538	0.649	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	7	46.7
5	3.0	3	20.0
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.667	1.047	0.489	0.573	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	2	13.3
5	3.0	4	26.7
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	1.183	0.787	0.883	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	3	20.0
5	3.0	6	40.0
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.867	1.125	0.380	0.304	

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	0	0.0
5	3.0	4	26.7
OTHER	0.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.133	1.246	0.529	0.683	

ITEM NUMBER 13

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	4	26.7
5	3.0	7	46.7
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	1.100	0.561	0.643	

ITEM NUMBER 14

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	5	33.3
5	3.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.000	0.845	0.536	0.550	

ITEM NUMBER 15

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	6	40.0
5	3.0	2	13.3
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	1.056	0.691	0.774	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 16

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	1	6.7
5	3.0	4	26.7
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	1.175	0.765	0.761	

ITEM NUMBER 17

OPTION	WGT	N	P
1	1.0	9	60.0
3	2.0	4	26.7
5	3.0	1	6.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	0.724	0.509	0.536	

ITEM NUMBER 18

OPTION	WGT	N	P
1	1.0	9	60.0
3	2.0	3	20.0
5	3.0	2	13.3
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	0.828	0.481	0.449	

ITEM NUMBER 19

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	2	13.3
5	3.0	2	13.3
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.200	0.941	0.636	0.582	

ITEM NUMBER 20

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	7	46.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.067	1.223	0.791	0.801	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 21

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	5	33.3
5	3.0	4	26.7
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.600	1.183	0.482	0.464	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	9	60.0
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	5	33.3
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	3	20.0
5	3.0	1	6.7
OTHER	0.0	5	33.3
TOTAL		15	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	5	33.3
5	3.0	4	26.7
TOTAL		15	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	9	60.0
3	2.0	3	20.0
5	3.0	3	20.0
TOTAL		15	

SUMMARY ITEM STATISTICS

SUBTEST 3 CLASSROOM LAYOUT

ITEM	ITEM STATS		CORRELATIONS		
	MEAN	S.D.	ST	TT	EC
1	1.467	0.915	0.797	0.875	
2	1.667	0.900	0.731	0.924	
3	1.000	0.926	0.440	0.404	
4	1.867	0.834	0.802	0.774	
5	1.600	0.828	0.728	0.734	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	0	0.0
5	3.0	5	33.3
OTHER	0.0	5	33.3
TOTAL		15	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	6	40.0
5	3.0	5	33.3
TOTAL		15	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	8	53.3
5	3.0	3	20.0
TOTAL		15	

SUMMARY ITEM STATISTICS

SUBTEST 3 CLASSROOM LAYOUT

ITEM	ITEM STATS		CORRELATIONS		
	MEAN	S.D.	ST	TT	EC
6	1.333	1.291	0.813	0.640	
7	2.067	0.799	0.836	0.758	
8	1.933	0.704	0.638	0.489	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 4

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	7	46.7
5	3.0	2	13.3
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.667	0.816	0.763	0.814	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	8	53.3
5	3.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.704	0.552	0.402	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	3	20.0
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.000	0.926	0.264	0.164	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	4	26.7
5	3.0	2	13.3
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.467	0.834	0.532	0.751	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	3	20.0
5	3.0	1	6.7
OTHER	0.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
0.933	0.961	0.111	0.378	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 4

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	6	40.0
5	3.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.799	0.711	0.738	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	8	53.3
5	3.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.800	0.676	0.735	0.597	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	9	60.0
5	3.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.000	0.655	0.691	0.533	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	1	6.7
5	3.0	1	6.7
OTHER	0.0	9	60.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
0.600	0.910	0.617	0.671	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	1.047	0.791	0.672	

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	4	26.7
5	3.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.933	0.884	0.771	0.712	

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUBTEST 5 PROGRAMMING

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	9	60.0
3	2.0	1	6.7
5	3.0	2	13.3
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.133	0.915	0.725	0.700	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	6	40.0
5	3.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.799	0.384	0.430	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	5	33.3
5	3.0	2	13.3
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	0.986	0.772	0.881	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	2	13.3
5	3.0	9	60.0
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	1.246	0.482	0.474	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	6	40.0
5	3.0	6	40.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	0.915	0.711	0.676	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 5 PROGRAMMING

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	4	26.7
5	3.0	3	20.0
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.533	0.990	0.786	0.794	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	6	40.0
5	3.0	2	13.3
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	1.056	0.811	0.722	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	4	26.7
5	3.0	10	66.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.600	0.632	0.180	0.136	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	7	46.7
5	3.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.000	0.756	0.706	0.799	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	0	0.0
5	3.0	6	40.0
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.533	1.302	0.709	0.802	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 5 PROGRAMMING

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	4	26.7
5	3.0	2	13.3
OTHER	0.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.200	1.082	0.720	0.715	

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	2	13.3
5	3.0	4	26.7
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	1.183	0.583	0.659	

ITEM NUMBER 13

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	1	6.7
5	3.0	3	20.0
OTHER	0.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.133	1.125	0.745	0.776	

ITEM NUMBER 14

OPTION	WGT	N	P
1	1.0	0	0.0
3	2.0	11	73.3
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
2.067	0.704	0.703	0.627	

ITEM NUMBER 15

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	0	0.0
5	3.0	0	0.0
OTHER	0.0	8	53.3
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
0.467	0.516	0.598	0.547	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 5 PROGRAMMING

ITEM NUMBER 16

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	6	40.0
5	3.0	5	33.3
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
1.867	1.125	0.665	0.770	

ITEM NUMBER 17

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	1	6.7
5	3.0	3	20.0
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
1.200	1.082	0.610	0.600	

ITEM NUMBER 18

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	8	53.3
5	3.0	1	6.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
1.600	0.737	0.461	0.527	

ITEM NUMBER 19

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	5	33.3
5	3.0	7	46.7
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
2.267	0.799	0.420	0.493	

APPENDIX SIX

ITEM ANALYSIS FOR RATER TWO

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	4	26.7
5	3.0	9	60.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.467	0.743	0.228	0.233	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	3	20.0
5	3.0	8	53.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	1.125	0.517	0.608	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	3	20.0
5	3.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.867	0.915	0.725	0.665	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	7	46.7
5	3.0	4	26.7
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.800	1.082	0.563	0.590	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	3	20.0
5	3.0	10	66.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.533	0.743	0.473	0.577	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	5	33.3
5	3.0	2	13.3
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	1.047	-0.099	0.162	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	3	20.0
5	3.0	2	13.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	0.900	0.841	0.834	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	8	53.3
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.333	0.617	0.538	0.633	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	2	13.3
5	3.0	9	60.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.333	0.900	0.536	0.608	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	7	46.7
5	3.0	4	26.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.933	0.884	0.496	0.571	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	2	13.3
5	3.0	10	66.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.467	0.834	0.371	0.471	

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	6	40.0
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.200	0.775	0.645	0.643	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	2	13.3
5	3.0	5	33.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.667	1.113	0.729	0.777	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	3	20.0
5	3.0	9	60.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.400	0.828	0.219	0.346	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	4	26.7
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.884	0.379	0.491	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	2	13.3
5	3.0	11	73.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.600	0.737	0.204	0.351	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	2	13.3
5	3.0	8	53.3
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	1.060	0.385	0.416	

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	0	0.0
5	3.0	2	13.3
OTHER	0.0	9	60.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
0.667	1.047	0.723	0.771	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	11	73.3
5	3.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.000	0.535	0.673	0.681	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	3	20.0
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.533	0.915	0.692	0.720	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	7	46.7
5	3.0	2	13.3
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.467	1.060	0.474	0.498	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	3	20.0
5	3.0	4	26.7
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.467	1.187	0.837	0.877	

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	2	13.3
5	3.0	5	33.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.667	1.113	0.545	0.508	

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	1	6.7
5	3.0	4	26.7
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	1.175	0.440	0.589	

ITEM NUMBER 13

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	5	33.3
5	3.0	7	46.7
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
2.133	1.060	0.544	0.629	

ITEM NUMBER 14

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	4	26.7
5	3.0	6	40.0
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
2.067	0.884	0.640	0.599	

ITEM NUMBER 15

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	7	46.7
5	3.0	2	13.3
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
1.467	1.060	0.709	0.754	

LERTAP 2.0

SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 16

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	3	20.0
5	3.0	3	20.0
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
1.400	1.056	0.867	0.855	

ITEM NUMBER 17

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
1.333	1.047	0.658	0.666	

ITEM NUMBER 18

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	4	26.7
5	3.0	1	6.7
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
1.267	0.799	0.316	0.347	

ITEM NUMBER 19

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
1.333	1.047	0.618	0.581	

ITEM NUMBER 20

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	7	46.7
TOTAL		15	

ITEM STATS

MEAN	S.D.	ST	TT	EC
1.067	1.223	0.782	0.784	

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 21

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	2	13.3	1.467	1.246	0.541	0.539	
3	2.0	4	26.7					
5	3.0	4	26.7					
OTHER	0.0	5	33.3					
TOTAL		15						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 3 CLASSROOM LAYOUT

ITEM NUMBER 1

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	10	66.7	1.533	0.834	0.797	0.830	
3	2.0	2	13.3					
5	3.0	3	20.0					
TOTAL		15						

ITEM NUMBER 2

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.733	0.799	0.710	0.939	
3	2.0	5	33.3					
5	3.0	3	20.0					
TOTAL		15						

ITEM NUMBER 3

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	0.933	0.961	0.335	0.398	
3	2.0	3	20.0					
5	3.0	1	6.7					
OTHER	0.0	6	40.0					
TOTAL		15						

ITEM NUMBER 4

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.800	0.775	0.829	0.849	
3	2.0	6	40.0					
5	3.0	3	20.0					
TOTAL		15						

ITEM NUMBER 5

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.800	0.862	0.648	0.585	
3	2.0	4	26.7					
5	3.0	4	26.7					
TOTAL		15						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 3 CLASSROOM LAYOUT

ITEM NUMBER 6

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.333	1.291	0.811	0.634	
3	2.0	0	0.0					
5	3.0	5	33.3					
OTHER	0.0	5	33.3					
TOTAL		15						

ITEM NUMBER 7

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	2.067	0.799	0.847	0.774	
3	2.0	6	40.0					
5	3.0	5	33.3					
TOTAL		15						

ITEM NUMBER 8

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	3	20.0	1.933	0.594	0.535	0.258	
3	2.0	10	66.7					
5	3.0	2	13.3					
TOTAL		15						

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 4

ITEM NUMBER 1

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.733	0.704	0.856	0.887	
3	2.0	7	46.7					
5	3.0	2	13.3					
TOTAL		15						

ITEM NUMBER 2

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	3	20.0	2.067	0.704	0.568	0.433	
3	2.0	8	53.3					
5	3.0	4	26.7					
TOTAL		15						

ITEM NUMBER 3

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	2.067	0.884	0.510	0.359	
3	2.0	4	26.7					
5	3.0	6	40.0					
TOTAL		15						

ITEM NUMBER 4

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.733	0.961	0.814	0.749	
3	2.0	4	26.7					
5	3.0	4	26.7					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 5

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	0.867	0.990	0.136	0.439	
3	2.0	3	20.0					
5	3.0	1	6.7					
OTHER	0.0	7	46.7					
TOTAL		15						

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 4

ITEM NUMBER 6

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	2.067	0.799	0.822	0.785	
3	2.0	6	40.0					
5	3.0	5	33.3					
TOTAL		15						

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	6	40.0
5	3.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.667	0.724	0.690	0.612	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	10	66.7
5	3.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.594	0.713	0.563	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	3	20.0
5	3.0	0	0.0
OTHER	0.0	9	60.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
0.600	0.828	0.747	0.920	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	4	26.7
5	3.0	3	20.0
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.533	0.990	0.782	0.658	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 4

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	5	33.3
5	3.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.000	0.845	0.847	0.733	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 5 PROGRAMMING

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	0	0.0
5	3.0	3	20.0
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.133	1.060	0.738	0.673	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	6	40.0
5	3.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.799	0.380	0.490	

ITEM NUMBER 3

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.267	0.961	0.810	0.893	
3	2.0	3	20.0					
5	3.0	2	13.3					
OTHER	0.0	3	20.0					
TOTAL		15						

ITEM NUMBER 4

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	1	6.7	2.133	1.246	0.482	0.471	
3	2.0	2	13.3					
5	3.0	9	60.0					
OTHER	0.0	3	20.0					
TOTAL		15						

ITEM NUMBER 5

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	2	13.3	2.200	0.941	0.713	0.651	
3	2.0	5	33.3					
5	3.0	7	46.7					
OTHER	0.0	1	6.7					
TOTAL		15						

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 5 PROGRAMMING

ITEM NUMBER 6

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.600	0.910	0.874	0.827	
3	2.0	4	26.7					
5	3.0	3	20.0					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 7

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.467	0.834	0.720	0.613	
3	2.0	7	46.7					
5	3.0	1	6.7					
OTHER	0.0	2	13.3					
TOTAL		15						

ITEM NUMBER 8

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	1	6.7	2.533	0.640	0.213	0.208	
3	2.0	5	33.3					
5	3.0	9	60.0					
TOTAL		15						

ITEM NUMBER 9

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.867	0.990	0.779	0.836	
3	2.0	4	26.7					
5	3.0	5	33.3					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 10

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.667	1.175	0.736	0.804	
3	2.0	0	0.0					
5	3.0	6	40.0					
OTHER	0.0	2	13.3					
TOTAL		15						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 5 PROGRAMMING

ITEM NUMBER 11

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.200	0.941	0.590	0.542	
3	2.0	5	33.3					
5	3.0	1	6.7					
OTHER	0.0	4	26.7					
TOTAL		15						

ITEM NUMBER 12

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.400	1.183	0.576	0.646	
3	2.0	2	13.3					
5	3.0	4	26.7					
OTHER	0.0	4	26.7					
TOTAL		15						

ITEM NUMBER 13

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.267	1.100	0.661	0.665	
3	2.0	2	13.3					
5	3.0	3	20.0					
OTHER	0.0	4	26.7					
TOTAL		15						

ITEM NUMBER 14

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	1	6.7	2.133	0.834	0.679	0.658	
3	2.0	8	53.3					
5	3.0	5	33.3					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 15

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	8	53.3	0.533	0.516	0.626	0.541	
3	2.0	0	0.0					
5	3.0	0	0.0					
OTHER	0.0	7	46.7					
TOTAL		15						

ITEM NUMBER 16

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	2	13.3	1.933	1.033	0.695	0.821	
3	2.0	6	40.0					
5	3.0	5	33.3					
OTHER	0.0	2	13.3					
TOTAL		15						

ITEM NUMBER 17

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.000	1.000	0.782	0.738	
3	2.0	1	6.7					
5	3.0	2	13.3					
OTHER	0.0	5	33.3					
TOTAL		15						

ITEM NUMBER 18

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.600	0.737	0.641	0.675	
3	2.0	8	53.3					
5	3.0	1	6.7					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 19

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	2.133	0.834	0.520	0.637	
3	2.0	5	33.3					
5	3.0	6	40.0					
TOTAL		15						

APPENDIX SEVEN

ITEM ANALYSIS FOR RATER THREE

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	5	33.3
5	3.0	8	53.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.400	0.737	0.312	0.297	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	4	26.7
5	3.0	7	46.7
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	1.100	0.507	0.640	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	4	26.7
5	3.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.800	0.862	0.666	0.709	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	3	20.0
5	3.0	4	26.7
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.600	1.056	0.743	0.713	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	2	13.3
5	3.0	10	66.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.467	0.834	0.432	0.558	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	4	26.7
5	3.0	3	20.0
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	1.121	0.021	0.257	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	3	20.0
5	3.0	2	13.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	0.900	0.870	0.834	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	9	60.0
5	3.0	4	26.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.799	0.357	0.453	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	5	33.3
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	0.834	0.459	0.655	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	8	53.3
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.867	0.834	0.457	0.575

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	4	26.7
5	3.0	9	60.0
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.467	0.743	0.294	0.302

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	5	33.3
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.133	0.834	0.621	0.572

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	3	20.0
5	3.0	4	26.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.667	0.976	0.806	0.813

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	4	26.7
5	3.0	8	53.3
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.333	0.816	0.072	0.188

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	3	20.0
5	3.0	7	46.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.133	0.915	0.473	0.606

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	3	20.0
5	3.0	10	66.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.533	0.743	0.256	0.406

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	2	13.3
5	3.0	8	53.3
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.133	1.060	0.350	0.413

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	3	20.0	0.733	1.100	0.848	0.840	
3	2.0	1	6.7					
5	3.0	2	13.3					
OTHER	0.0	9	60.0					
TOTAL		15						

ITEM NUMBER 7

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	3	20.0	1.933	0.594	0.751	0.785	
3	2.0	10	66.7					
5	3.0	2	13.3					
TOTAL		15						

ITEM NUMBER 8

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.667	0.900	0.734	0.769	
3	2.0	5	33.3					
5	3.0	3	20.0					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 9

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	3	20.0	1.533	0.990	0.448	0.508	
3	2.0	7	46.7					
5	3.0	2	13.3					
OTHER	0.0	3	20.0					
TOTAL		15						

ITEM NUMBER 10

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	1.333	1.234	0.867	0.909	
3	2.0	2	13.3					
5	3.0	4	26.7					
OTHER	0.0	5	33.3					
TOTAL		15						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 11

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.667	1.113	0.489	0.470	
3	2.0	2	13.3					
5	3.0	5	33.3					
OTHER	0.0	2	13.3					
TOTAL		15						

ITEM NUMBER 12

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.333	1.175	0.447	0.571	
3	2.0	1	6.7					
5	3.0	4	26.7					
OTHER	0.0	4	26.7					
TOTAL		15						

ITEM NUMBER 13

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	1	6.7	2.067	1.033	0.618	0.700	
3	2.0	6	40.0					
5	3.0	6	40.0					
OTHER	0.0	2	13.3					
TOTAL		15						

ITEM NUMBER 14

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	4	26.7
5	3.0	6	40.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.884	0.636	0.629	

ITEM NUMBER 15

OPTION	WGT	N	P
1	1.0	2	13.3
3	2.0	6	40.0
5	3.0	3	20.0
OTHER	0.0	4	26.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.533	1.125	0.634	0.664	

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 16

OPTION	WGT	N	P
1	1.0	6	40.0
3	2.0	3	20.0
5	3.0	3	20.0
OTHER	0.0	3	20.0
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.400	1.056	0.854	0.851	

ITEM NUMBER 17

OPTION	WGT	N	P
1	1.0	9	60.0
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.467	0.915	0.678	0.704	

ITEM NUMBER 18

OPTION	WGT	N	P
1	1.0	10	66.7
3	2.0	2	13.3
5	3.0	1	6.7
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.133	0.743	0.490	0.529	

ITEM NUMBER 19

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	3	20.0
5	3.0	2	13.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	0.900	0.569	0.510	

ITEM NUMBER 20

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	2	13.3
5	3.0	3	20.0
OTHER	0.0	7	46.7
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.067	1.223	0.796	0.771	

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 21

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	6	40.0
5	3.0	3	20.0
OTHER	0.0	5	33.3
TOTAL		15	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.467	1.187	0.604	0.598	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	10	66.7
3	2.0	2	13.3
5	3.0	3	20.0
TOTAL		15	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	5	33.3
5	3.0	3	20.0
TOTAL		15	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	2	13.3
5	3.0	2	13.3
OTHER	0.0	4	26.7
TOTAL		15	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	5	33.3
5	3.0	3	20.0
TOTAL		15	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	8	53.3
3	2.0	4	26.7
5	3.0	3	20.0
TOTAL		15	

TEST NO 1 ANALYSIS OF HANSSON SURVEY

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	0	0.0
5	3.0	5	33.3
OTHER	0.0	5	33.3
TOTAL		15	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	4	26.7
3	2.0	6	40.0
5	3.0	5	33.3
TOTAL		15	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	1	6.7
3	2.0	12	80.0
5	3.0	2	13.3
TOTAL		15	

SUMMARY ITEM STATISTICS

SUBTEST 3 CLASSROOM LAYOUT

	ITEM STATS		CORRELATIONS		
	MEAN	S.D.	ST	TT	EC
ITEM NUMBER 1	1.533	0.834	0.800	0.845	
ITEM NUMBER 2	1.733	0.799	0.746	0.935	
ITEM NUMBER 3	1.133	0.990	0.335	0.353	
ITEM NUMBER 4	1.733	0.799	0.878	0.853	
ITEM NUMBER 5	1.667	0.816	0.686	0.693	

SUBTEST 3 CLASSROOM LAYOUT

	ITEM STATS		CORRELATIONS		
	MEAN	S.D.	ST	TT	EC
ITEM NUMBER 6	1.333	1.291	0.805	0.638	
ITEM NUMBER 7	2.067	0.799	0.848	0.780	
ITEM NUMBER 8	2.067	0.458	0.518	0.452	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 4 CLASSROOM ENVIRONMENT

ITEM NUMBER 1

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.733	0.704	0.844	0.888	
3	2.0	7	46.7					
5	3.0	2	13.3					
TOTAL		15						

ITEM NUMBER 2

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	3	20.0	2.067	0.704	0.575	0.436	
3	2.0	8	53.3					
5	3.0	4	26.7					
TOTAL		15						

ITEM NUMBER 3

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.867	1.060	0.395	0.230	
3	2.0	2	13.3					
5	3.0	6	40.0					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 4

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.800	1.014	0.823	0.823	
3	2.0	3	20.0					
5	3.0	5	33.3					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 5

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.000	0.926	0.060	0.435	
3	2.0	3	20.0					
5	3.0	1	6.7					
OTHER	0.0	5	33.3					
TOTAL		15						

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 4 CLASSROOM ENVIRONMENT

ITEM NUMBER 6

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	2.067	0.799	0.801	0.778	
3	2.0	6	40.0					
5	3.0	5	33.3					
TOTAL		15						

ITEM NUMBER 7

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.800	0.676	0.686	0.614	
3	2.0	8	53.3					
5	3.0	2	13.3					
TOTAL		15						

ITEM NUMBER 8

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	2	13.3	2.067	0.594	0.681	0.554	
3	2.0	10	66.7					
5	3.0	3	20.0					
TOTAL		15						

ITEM NUMBER 9

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	3	20.0	0.600	0.828	0.677	0.851	
3	2.0	3	20.0					
5	3.0	0	0.0					
OTHER	0.0	9	60.0					
TOTAL		15						

ITEM NUMBER 10

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	6	40.0	1.533	0.990	0.796	0.616	
3	2.0	4	26.7					
5	3.0	3	20.0					
OTHER	0.0	2	13.3					
TOTAL		15						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 4 CLASSROOM ENVIROMENT

ITEM NUMBER 11

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	2.000	0.845	0.879	0.743	
3	2.0	5	33.3					
5	3.0	5	33.3					
TOTAL		15						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 5 PROGRAMMING

ITEM NUMBER 1

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	9	60.0	1.200	1.014	0.726	0.676	
3	2.0	0	0.0					
5	3.0	3	20.0					
OTHER	0.0	3	20.0					
TOTAL		15						

ITEM NUMBER 2

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	2.133	0.834	0.525	0.556	
3	2.0	5	33.3					
5	3.0	6	40.0					
TOTAL		15						

ITEM NUMBER 3

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.333	0.816	0.630	0.761	
3	2.0	5	33.3					
5	3.0	1	6.7					
OTHER	0.0	2	13.3					
TOTAL		15						

ITEM NUMBER 4

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	1	6.7	2.133	1.246	0.444	0.460	
3	2.0	2	13.3					
5	3.0	9	60.0					
OTHER	0.0	3	20.0					
TOTAL		15						

ITEM NUMBER 5

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	2	13.3	2.133	0.915	0.707	0.673	
3	2.0	6	40.0					
5	3.0	6	40.0					
OTHER	0.0	1	6.7					
TOTAL		15						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 5 PROGRAMMING

ITEM NUMBER 6

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.600	0.910	0.862	0.827	
3	2.0	4	26.7					
5	3.0	3	20.0					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 7

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	26.7	1.600	0.910	0.690	0.627	
3	2.0	7	46.7					
5	3.0	2	13.3					
OTHER	0.0	2	13.3					
TOTAL		15						

ITEM NUMBER 8

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	2	13.3	2.467	0.743	0.279	0.311	
3	2.0	4	26.7					
5	3.0	9	60.0					
TOTAL		15						

ITEM NUMBER 9

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	8	53.3	1.800	0.941	0.736	0.845	
3	2.0	2	13.3					
5	3.0	5	33.3					
TOTAL		15						

ITEM NUMBER 10

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	46.7	1.667	1.175	0.740	0.833	
3	2.0	0	0.0					
5	3.0	6	40.0					
OTHER	0.0	2	13.3					
TOTAL		15						

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 5 PROGRAMMING

ITEM NUMBER 11

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.200	0.941	0.530	0.528	
3	2.0	5	33.3					
5	3.0	1	6.7					
OTHER	0.0	4	26.7					
TOTAL		15						

ITEM NUMBER 12

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	5	33.3	1.400	1.183	0.582	0.640	
3	2.0	2	13.3					
5	3.0	4	26.7					
OTHER	0.0	4	26.7					
TOTAL		15						

ITEM NUMBER 13

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	8	53.3	1.133	1.060	0.697	0.690	
3	2.0	0	0.0					
5	3.0	3	20.0					
OTHER	0.0	4	26.7					
TOTAL		15						

ITEM NUMBER 14

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	2	13.3	2.000	0.845	0.669	0.666	
3	2.0	8	53.3					
5	3.0	4	26.7					
OTHER	0.0	1	6.7					
TOTAL		15						

ITEM NUMBER 15

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	0	0.0
5	3.0	0	0.0
OTHER	0.0	8	53.3
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
0.467	0.516	0.612	0.591	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 5 PROGRAMMING

ITEM NUMBER 16

OPTION	WGT	N	P
1	1.0	3	20.0
3	2.0	5	33.3
5	3.0	5	33.3
OTHER	0.0	2	13.3
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
1.867	1.060	0.747	0.846	

ITEM NUMBER 17

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	0	0.0
5	3.0	3	20.0
OTHER	0.0	5	33.3
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
1.067	1.100	0.839	0.792	

ITEM NUMBER 18

OPTION	WGT	N	P
1	1.0	7	46.7
3	2.0	6	40.0
5	3.0	1	6.7
OTHER	0.0	1	6.7
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
1.467	0.743	0.617	0.691	

ITEM NUMBER 19

OPTION	WGT	N	P
1	1.0	5	33.3
3	2.0	4	26.7
5	3.0	6	40.0
TOTAL		15	

ITEM STATS			CORRELATIONS	
MEAN	S.D.	ST	TT	EC
2.067	0.884	0.570	0.660	

APPENDIX EIGHT

ITEM ANALYSIS FOR COMBINED RATERS

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	6	13.3
3	2.0	14	31.1
5	3.0	25	55.6
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.422	0.723	0.284	0.271	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	6	13.3
3	2.0	12	26.7
5	3.0	22	48.9
OTHER	0.0	5	11.1
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	1.036	0.527	0.624	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	21	46.7
3	2.0	11	24.4
5	3.0	13	28.9
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.822	0.860	0.676	0.679	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	10	22.2
3	2.0	16	35.6
5	3.0	13	28.9
OTHER	0.0	6	13.3
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.800	1.014	0.604	0.590	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	8	17.8
3	2.0	7	15.6
5	3.0	30	66.7
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.489	0.787	0.442	0.533	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	10	22.2
3	2.0	15	33.3
5	3.0	7	15.6
OTHER	0.0	13	28.9
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.356	1.069	-0.074	0.202	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	24	53.3
3	2.0	9	20.0
5	3.0	6	13.3
OTHER	0.0	6	13.3
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	0.879	0.855	0.832	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	3	6.7
3	2.0	27	60.0
5	3.0	14	31.1
OTHER	0.0	1	2.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.200	0.661	0.469	0.581	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	13	28.9
3	2.0	10	22.2
5	3.0	22	48.9
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
2.200	0.869	0.531	0.641	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	10	22.2
3	2.0	22	48.9
5	3.0	10	22.2
OTHER	0.0	3	6.7
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
1.867	0.842	0.515	0.609	

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 1 TEACHER BEHAVIOUR

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	6	13.3
3	2.0	10	22.2
5	3.0	29	64.4
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
2.511	0.727	0.388	0.426	

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	9	20.0
3	2.0	18	40.0
5	3.0	18	40.0
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
2.200	0.757	0.643	0.621	

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	19	42.2
3	2.0	9	20.0
5	3.0	13	28.9
OTHER	0.0	4	8.9
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
1.689	0.996	0.766	0.791	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	9	20.0
3	2.0	12	26.7
5	3.0	24	53.3
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
2.333	0.798	0.142	0.263	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	14	31.1
3	2.0	11	24.4
5	3.0	20	44.4
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
2.133	0.869	0.434	0.544	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	5	11.1
3	2.0	8	17.8
5	3.0	32	71.1
TOTAL		45	

ITEM STATS

MEAN	S.D.	CORRELATIONS ST	TT	EC
2.600	0.688	0.194	0.342	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	14	31.1
3	2.0	6	13.3
5	3.0	22	48.9
OTHER	0.0	3	6.7
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.044	1.043	0.364	0.387

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	10	22.2
3	2.0	3	6.7
5	3.0	6	13.3
OTHER	0.0	26	57.8
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
0.756	1.069	0.802	0.813

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	6	13.3
3	2.0	32	71.1
5	3.0	7	15.6
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.022	0.543	0.669	0.667

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	22	48.9
3	2.0	11	24.4
5	3.0	9	20.0
OTHER	0.0	3	6.7
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.578	0.892	0.654	0.710

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	7	15.6
3	2.0	21	46.7
5	3.0	7	15.6
OTHER	0.0	10	22.2
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.556	1.013	0.468	0.524

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	13	28.9
3	2.0	7	15.6
5	3.0	12	26.7
OTHER	0.0	13	28.9
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.400	1.176	0.830	0.890

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	16	35.6
3	2.0	7	15.6
5	3.0	16	35.6
OTHER	0.0	6	13.3
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.733	1.095	0.471	0.426

ITEM NUMBER 12

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	17	37.8	1.267	1.176	0.468	0.612	
3	2.0	2	4.4					
5	3.0	12	26.7					
OTHER	0.0	14	31.1					
TOTAL		45						

ITEM NUMBER 13

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	4	8.9	2.089	1.041	0.573	0.656	
3	2.0	15	33.3					
5	3.0	20	44.4					
OTHER	0.0	6	13.3					
TOTAL		45						

ITEM NUMBER 14

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	15	33.3	2.044	0.852	0.605	0.593	
3	2.0	13	28.9					
5	3.0	17	37.8					
TOTAL		45						

ITEM NUMBER 15

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	15.6	1.467	1.057	0.675	0.728	
3	2.0	19	42.2					
5	3.0	7	15.6					
OTHER	0.0	12	26.7					
TOTAL		45						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 16

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	18	40.0	1.378	1.072	0.824	0.818	
3	2.0	7	15.6					
5	3.0	10	22.2					
OTHER	0.0	10	22.2					
TOTAL		45						

ITEM NUMBER 17

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	25	55.6	1.378	0.886	0.617	0.636	
3	2.0	8	17.8					
5	3.0	7	15.6					
OTHER	0.0	5	11.1					
TOTAL		45						

ITEM NUMBER 18

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	27	60.0	1.267	0.780	0.422	0.435	
3	2.0	9	20.0					
5	3.0	4	8.9					
OTHER	0.0	5	11.1					
TOTAL		45						

ITEM NUMBER 19

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	23	51.1	1.289	0.944	0.604	0.556	
3	2.0	7	15.6					
5	3.0	7	15.6					
OTHER	0.0	8	17.8					
TOTAL		45						

ITEM NUMBER 20

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	9	20.0	1.067	1.195	0.789	0.785	
3	2.0	6	13.3					
5	3.0	9	20.0					
OTHER	0.0	21	46.7					
TOTAL		45						

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 2 STUDENT BEHAVIOUR

ITEM NUMBER 21

OPTION	WGT	N	P
1	1.0	5	11.1
3	2.0	15	33.3
5	3.0	11	24.4
OTHER	0.0	14	31.1
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.511	1.180	0.543	0.533	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 3 CLASSROOM LAYOUT

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	29	64.4
3	2.0	6	13.3
5	3.0	9	20.0
OTHER	0.0	1	2.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.511	0.843	0.798	0.848	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	20	44.4
3	2.0	15	33.3
5	3.0	9	20.0
OTHER	0.0	1	2.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.711	0.815	0.729	0.929	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	18	40.0
3	2.0	8	17.8
5	3.0	4	8.9
OTHER	0.0	15	33.3
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.022	0.941	0.368	0.382	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	19	42.2
3	2.0	16	35.6
5	3.0	10	22.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.800	0.786	0.829	0.822	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	24	53.3
3	2.0	11	24.4
5	3.0	10	22.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.689	0.821	0.683	0.666	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 3 CLASSROOM LAYOUT

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	15	33.3
3	2.0	0	0.0
5	3.0	15	33.3
OTHER	0.0	15	33.3
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.333	1.261	0.809	0.637	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	12	26.7
3	2.0	18	40.0
5	3.0	15	33.3
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.780	0.843	0.770	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	8	17.8
3	2.0	30	66.7
5	3.0	7	15.6
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.978	0.583	0.564	0.390	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 4 CLASSROOM ENVIRONMENT

ITEM NUMBER 1

OPTION	WGT	N	P
1	1.0	17	37.8
3	2.0	21	46.7
5	3.0	6	13.3
OTHER	0.0	1	2.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.711	0.727	0.815	0.857	

ITEM NUMBER 2

OPTION	WGT	N	P
1	1.0	9	20.0
3	2.0	24	53.3
5	3.0	12	26.7
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.688	0.564	0.424	

ITEM NUMBER 3

OPTION	WGT	N	P
1	1.0	17	37.8
3	2.0	9	20.0
5	3.0	18	40.0
OTHER	0.0	1	2.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.978	0.941	0.384	0.248	

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	20	44.4
3	2.0	11	24.4
5	3.0	11	24.4
OTHER	0.0	3	6.7
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.667	0.929	0.727	0.766	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	15	33.3
3	2.0	9	20.0
5	3.0	3	6.7
OTHER	0.0	18	40.0
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
0.933	0.939	0.103	0.416	

LERTAP 2.0

TEST NO 1 ANALYSIS OF HANSSON SURVEY

SUMMARY ITEM STATISTICS

SUBTEST 4 CLASSROOM ENVIRONMENT

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	12	26.7
3	2.0	18	40.0
5	3.0	15	33.3
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.067	0.780	0.778	0.767	

ITEM NUMBER 7

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	17	37.8	1.756	0.679	0.695	0.604	
3	2.0	22	48.9					
5	3.0	6	13.3					
TOTAL		45						

ITEM NUMBER 8

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	7	15.6	2.044	0.601	0.693	0.548	
3	2.0	29	64.4					
5	3.0	9	20.0					
TOTAL		45						

ITEM NUMBER 9

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	10	22.2	0.600	0.837	0.677	0.809	
3	2.0	7	15.6					
5	3.0	1	2.2					
OTHER	0.0	27	60.0					
TOTAL		45						

ITEM NUMBER 10

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	19	42.2	1.467	0.991	0.787	0.646	
3	2.0	10	22.2					
5	3.0	9	20.0					
OTHER	0.0	7	15.6					
TOTAL		45						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 4 CLASSROOM ENVIROMENT

ITEM NUMBER 11

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	16	35.6	1.978	0.839	0.832	0.728	
3	2.0	14	31.1					
5	3.0	15	33.3					
TOTAL		45						

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 5 PROGRAMMING

ITEM NUMBER 1

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	26	57.8	1.156	0.976	0.728	0.681	
3	2.0	1	2.2					
5	3.0	8	17.8					
OTHER	0.0	10	22.2					
TOTAL		45						

ITEM NUMBER 2

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	12	26.7	2.089	0.793	0.430	0.493	
3	2.0	17	37.8					
5	3.0	16	35.6					
TOTAL		45						

ITEM NUMBER 3

OPTION	WGT	N	P	ITEM STATS MEAN	S.D.	CORRELATIONS ST	TT	EC
1	1.0	19	42.2	1.333	0.905	0.737	0.843	
3	2.0	13	28.9					
5	3.0	5	11.1					
OTHER	0.0	8	17.8					
TOTAL		45						

ITEM NUMBER 4

OPTION	WGT	N	P
1	1.0	3	6.7
3	2.0	6	13.3
5	3.0	27	60.0
OTHER	0.0	9	20.0
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.133	1.217	0.469	0.468	

ITEM NUMBER 5

OPTION	WGT	N	P
1	1.0	6	13.3
3	2.0	17	37.8
5	3.0	19	42.2
OTHER	0.0	3	6.7
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.156	0.903	0.710	0.667	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 5 PROGRAMMING

ITEM NUMBER 6

OPTION	WGT	N	P
1	1.0	20	44.4
3	2.0	12	26.7
5	3.0	9	20.0
OTHER	0.0	4	8.9
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.578	0.917	0.837	0.814	

ITEM NUMBER 7

OPTION	WGT	N	P
1	1.0	12	26.7
3	2.0	20	44.4
5	3.0	5	11.1
OTHER	0.0	8	17.8
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.489	0.920	0.734	0.650	

ITEM NUMBER 8

OPTION	WGT	N	P
1	1.0	4	8.9
3	2.0	13	28.9
5	3.0	28	62.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
2.533	0.661	0.226	0.223	

ITEM NUMBER 9

OPTION	WGT	N	P
1	1.0	17	37.8
3	2.0	13	28.9
5	3.0	14	31.1
OTHER	0.0	1	2.2
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.889	0.885	0.736	0.821	

ITEM NUMBER 10

OPTION	WGT	N	P
1	1.0	19	42.2
3	2.0	0	0.0
5	3.0	18	40.0
OTHER	0.0	8	17.8
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.622	1.193	0.725	0.810	

LERTAP 2.0 — SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY — SUBTEST 5 PROGRAMMING

ITEM NUMBER 11

OPTION	WGT	N	P
1	1.0	14	31.1
3	2.0	14	31.1
5	3.0	4	8.9
OTHER	0.0	13	28.9
TOTAL		45	

ITEM STATS		CORRELATIONS		
MEAN	S.D.	ST	TT	EC
1.200	0.968	0.621	0.597	

ITEM NUMBER 12

OPTION	WGT	N	P
1	1.0	15	33.3
3	2.0	6	13.3
5	3.0	12	26.7
OTHER	0.0	12	26.7
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.400	1.156	0.580	0.648

ITEM NUMBER 13

OPTION	WGT	N	P
1	1.0	20	44.4
3	2.0	3	6.7
5	3.0	9	20.0
OTHER	0.0	13	28.9
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.178	1.072	0.700	0.710

ITEM NUMBER 14

OPTION	WGT	N	P
1	1.0	3	6.7
3	2.0	27	60.0
5	3.0	12	26.7
OTHER	0.0	3	6.7
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.067	0.780	0.679	0.649

ITEM NUMBER 15

OPTION	WGT	N	P
1	1.0	22	48.9
3	2.0	0	0.0
5	3.0	0	0.0
OTHER	0.0	23	51.1
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
0.489	0.506	0.611	0.559

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ANALYSIS OF HANSSON SURVEY SUBTEST 5 PROGRAMMING

ITEM NUMBER 16

OPTION	WGT	N	P
1	1.0	6	13.3
3	2.0	17	37.8
5	3.0	15	33.3
OTHER	0.0	7	15.6
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.889	1.049	0.701	0.811

ITEM NUMBER 17

OPTION	WGT	N	P
1	1.0	21	46.7
3	2.0	2	4.4
5	3.0	8	17.8
OTHER	0.0	14	31.1
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.089	1.041	0.739	0.707

ITEM NUMBER 18

OPTION	WGT	N	P
1	1.0	17	37.8
3	2.0	22	48.9
5	3.0	3	6.7
OTHER	0.0	3	6.7
TOTAL		45	

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
1.556	0.725	0.572	0.630

ITEM NUMBER 19

OPTION	WGT	N	P
1	1.0	12	26.7
3	2.0	14	31.1
5	3.0	19	42.2

ITEM STATS		CORRELATIONS	
MEAN	S.D.	ST	TT
2.156	0.824	0.503	0.597